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ORIGINAL ARTICLES.

THE OCULAR SYMPTOMS OF LOCOMOTOR ATAXIA.[1]

BY WILLIAM E. BRUNER, A.M., M.D.,
OF CLEVELAND, OHIO;
CLINICAL ASSISTANT IN OPHTHALMOLOGY, DISPENSARY OF THE WESTERN RESERVE MEDICAL COLLEGE, AND ASSISTANT IN CHARGE OF EYE CLINIC, CHARITY HOSPITAL.

VERY important in the diagnosis of tabes dorsalis, and especially in the early stages of the disease, are the ocular symptoms. Every person in whom locomotor ataxia is suspected should be subjected to a careful examination of the eyes, and not rarely it is the oculist whom the patient with developing posterior sclerosis first consults, and upon whom the responsibility rests of first detecting the oncoming disease in perhaps its very earliest stage, when, if at any time, it may be possible to check its progress. The ocular symptoms naturally arrange themselves into three groups: those pertaining to the internal muscles, especially the iris; those concerned with the external eye-muscles; and the changes in the optic nerve, or optic atrophy.

The affections of the internal muscles reveal themselves chiefly in pupillary changes, and these are numerous. The most important are: 1. Reflex iridoplegia. 2. Absolute iridoplegia. 3. Myosis. 4. Inequality of the pupils.

We should add to the pupillary symptoms mydriasis, one form of which would indicate irritation of the cilio-spinal center, and would be analogous to the increased knee-jerk found by Weiss and some others at the beginning of tabes. Instead of spastic mydriasis we may have another form—paralytic mydriasis.[2] Gowers states that the pupils may be even larger than normal, and then, he adds, the skin-reflex can be obtained, though the light-reflex cannot. Eulenburg,[3] among 64 cases, noted mydriasis in 9, myosis in 28, and states that the simultaneous occurrence of myosis and mydriasis occurs only in the late stages of the disease. Seguin found the mydriasis to be symmetric, differing in this respect from Müller[4] and Schmeichler. Hutchinson[5] reports a case in which monocular paralytic mydriasis preceded other ataxic symptoms by three years.

Though not so characteristic as the other changes, pupillary inequality is, according to Schmeichler,[1] the most frequent, while reflex iridoplegia is next in frequency. "Each of these symptoms," he says, "when found in an individual justifies the physician in inquiring for tabes." Jessup[2] says that inequality is often found, and Berger found it in 27.6 per cent. of his cases.

The myosis frequently spoken of as spinal myosis is an important sign of disease of the posterior columns of the cord. The only other disease in which it occurs as frequently is progressive paralysis of the insane. In cases in which the cervical spinal cord is first attacked myosis occurs as a very early symptom. The pupils cannot be dilated *ad maximum* by the energetic use of a strong mydriatic.[3] A characteristic point in the myosis is the fact that the pupil dilated to medium width by atropin requires an unusually long time (frequently from four to five weeks) to become again as narrow as it was before the instillation of the mydriatic.[4] The myosis is due to paralysis of the cilio-spinal center. It is explained by one authority[5] by the fact that paralysis of this center, which sends the vasomotor fibers to the bloodvessels of the iris, allows these vessels to become relaxed and consequently filled with blood, and hence the small pupil results. The longer this condition remains the more slowly will passive dilatation occur. The very minute pupil sometimes seen is, according to Noyes,[6] probably due to secondary contraction of the sphincter pupillæ.

Total iridoplegia, the reaction in accommodation as well as to light being lost, but accomodation itself remaining intact, is sometimes seen, but the most characteristic of all the pupillary changes is reflex iridoplegia, the pupil not responding to light, but reacting in accommodation. This condition is now familiarly known, in honor of the man who discovered it and brought it to the notice of the profession, as the Argyll-Robertson pupil.[7] It is explained as being due to paralysis of the cilio-spinal nerves, which were then regarded as the nerves supplying the sphincter iridis, but is now believed

[1] Read in part before the Cleveland Medical Society, May 10, 1895.

[2] Text-book of Nervous Diseases, vol. i.

[3] Wood's Nervous Diseases and their Diagnosis, p. 340.

[4] Centralblatt für die Gesammte Therapie.

[5] Archives of Surgery (London), July, 1893, p. 54.

[1] Archiv f. Ophth., 1883, xii, pp. 335 et seq.

[2] Ophth. Review, July, 1888.

[3] Norris and Oliver: Text-book of Ophthalmology, p. 484.

[4] Schmeichler: op. cit.

[5] Schmeichler: op. cit.

[6] Diseases of the Eye, 2d edition, p. 435.

[7] Edinburg Med. Journ., 1869, xiv, p. 669, and 1870, xv, p. 487.

to be due to disease at some distance from the spinal cord, namely, in Meynert's[1] fibers, which connect the corpora quadrigemina with the nuclei of the third nerve. Disease in these fibers may exist by continuity with disease of the cord, and in fact the close relationship between the optic atrophy and the sclerosis of the posterior columns is similarly explained, as Stilling[2] has found fibers passing directly from the optic tract into the crus cerebri, and both he and Edinger assert that this bundle of fibers makes its way through the crus to the pons varolii, and thence to the posterior column of the cord. Noyes[3] says that the Argyll-Robertson pupil may be due to disease of the fibers from the optic tract to the pons varolii, while Turner[4] holds the opinion that it is due to a lesion of the fibers connecting the optic tract and the pupillary nucleus—a statement that accords with that made by Swanzy, though less definite. Mauthner's[5] explanation is that the fibers for the pupillary light-reflex, lying in the wall of the third ventricle, suffer from a chronic ependymitis and a consequent sclerosis, an opinion with which Berger[6] agrees. Kahler, Mendel, and Oppenheim found the oculomotor nucleus intact, with absence of the light-reaction. "Hence," says Knies,[7] "the lesion must be sought in the centripetal fibers to the motor oculi nucleus or in their origin, unless the condition is due to a toxemia." Schmeichler,[8] however, believes that we cannot attribute this reflex iridoplegia to any direct anatomic basis, but that we must assign it to the "generally reduced irritability of the brain due to a morbid process." The whole nervous system, he contends, is inclined to sclerosis, which is, however, most marked in the posterior columns and optic nerves. It is proper, he thinks, to speak of a "diminution of nervous excitability in tabetics, which, while too slight to produce coarse functional disturbances, suffices to disturb the sensitive reflex mechanism of the pupil."

Usually in association with the Argyll-Robertson pupil we find, as was first observed by Erb, that the iris fails to dilate upon painful stimulation of the skin, especially of the skin of the neck. Reflex iridoplegia is sometimes accompanied by mydriasis and occasionally by paralysis of accommodation, but most often by myosis, and not infrequently there is slight irregularity in the outline of the pupil. Eventually the iris often fails to react in accommodation as well as to light. Sometimes we find decided torpor or sluggishness of the iris, but no paralysis; in fact, if we could trace the pupillary condition from the beginning, we should often find this torpor, then loss of reaction to light, then to irritation of the skin, and finally total iridoplegia.

I have said that reflex iridoplegia is the most characteristic of the pupillary changes. Wood says that it probably is pathognomonic of degeneration of the upper spinal cord, including the medulla, and that it occurs also in progressive paralysis of the insane; and Dana also says that it is found practically only in these two conditions. It occurs probably in some cases of nuclear disease,[1] and possibly in disseminated sclerosis; but so rarely is it found in any other condition that its presence alone, says Hansell,[2] would almost warrant the assumption of a commencing posterior sclerosis.

The pupil may rarely be unaffected in tabes. Gowers states that the reflex action to light is lost in more than five-sixths of all cases, and Berger,[3] in a series of 109 cases, found good pupillary reaction in only four (3.7 per cent.), and only in one case with ataxia well marked. Vincent[4] found the Argyll-Robertson pupil 47 times in 50 patients. On the other hand, Nettleship[5] says: "We do not yet know how often it may occur in healthy persons, or without eventual spinal disease. It certainly has comparatively little significance in old persons." Uhthoff[6] found it in a case of carbon-disulphid poisoning. Its loss may be due to preceding syphilis. Gowers[7] reports having seen several cases of loss of light-reflex in syphilitic patients without disease of the spinal cord, and his practical rule is that, apart from general paralysis of the insane, reflex iridoplegia always indicates either syphilis or tabes, and not infrequently both. Erb has described a similar case. So important, however, is this symptom that Spitzka[8] says it "may be regarded as a rule in neuro-pathology that whenever reflex iridoplegia is at any time accompanied by other acute motor disturbance, it is either of spinal origin, or in exceptional cases due to disease of the pons varolii." It is one of the earliest signs of developing tabes. "It may be assumed with safety," says Spitzka, "that in 99 out of 100 cases both the

[1] Swanzy: Diseases of the Eye, p. 281: Noyes: Diseases of the Eye, p. 436.
[2] Beilageheft zu Zehender's Monatsblätter, xvii, pp. 203–207.
[3] Op. cit.
[4] Ophth. Hosp. Reports, vol. xiii (Dec. 1892), p. iii, p. 328.
[5] Die nucleären Augenmuskellähmungen, p. 353.
[6] Archiv f. Ophth., 1890, vol. xix, p. 454.
[7] The Eye in General Diseases, p. 192.
[8] Op. cit.

[1] Norris and Oliver: Text-book of Ophthalmology, p. 543.
[2] Journal of the American Medical Association, February 18, 1893, p. 168.
[3] Op. cit., p. 450.
[4] Des Phénomènes Oculo-pupillaires dans l'ataxie locomotrice. Thèse de Paris, 1877.
[5] Diseases of the Eye, fourth American edition, p. 452.
[6] Graefe's Archiv, vol. xxxi, 1.
[7] Lancet, January, 1891, p. 95.
[8] Pepper's System of Medicine, vol. v.

inability of the pupil to respond to light and the absence of the knee-jerk will be found long before ataxia is developed," though he states that the "loss of co-ordination and the reflex iridoplegia are the most important of the exact prodromal signs." In fact, he declares that one or both of these must be present to justify the diagnosis of incipient tabes; "not even the absence of the knee-jerk ranks as high as these two signs." When present this reflex iridoplegia is permanent and unvarying, and yet even in this regard there are rare exceptions, as Spitzka[1] has reported two cases in which this symptom disappeared, to reappear in two months in one case, and in eight months in the other case.

Berger[2] reports two cases in which this condition was unilateral, and Gowers one such case. Hansell[3] reports a case in which were found anisocoria (inequality of the pupils), unilateral Argyll-Robertson pupil, limited color-field, partial loss of knee-jerk, and fleeting pains in the feet. Recently I myself had a similar case under observation.

Paralysis of accommodation is occasionally met with as an early symptom. Galezowski has reported several such cases, and Berger[4] reports two without paralysis of the sphincter, but with reflex iridoplegia. In the latter stages of the disease this paralysis is more frequent, and Berger reports 23 cases, in "only one-third of which was the paralysis of accommodation accompanied by mydriasis."

The tabetic affections of the external eye-muscles may be divided into two groups, those occurring early in the disease and frequently transient, and those belonging to the later stages of the disease, and more often permanent, though either may occur at any stage.

In regard to the relative frequency of the muscles or nerves affected, the third nerve is the most often paralyzed, the sixth less frequently, and the fourth only exceptionally; but of individual muscles, the external rectus is most frequently affected, while ptosis from paralysis of the levator palpebræ superioris and paralysis of the internal rectus (causing external squint) are next in frequency. Several muscles may be involved, or we may have an "associated paralysis," as loss of convergence with loss of accommodation, although the internal recti act well under other conditions; or a progressive ophthalmoplegia or complete ophthalmoplegia externa. Buzzard[5] reports two cases of ophthalmoplegia externa in tabes, while Hutchinson,[6] in commenting upon six cases of this condition, says: "There can be no doubt that ophthalmoplegia externa is sometimes a part of the general malady known as locomotor ataxia, especially when that disease is due to syphilis."

As the result of paralysis of an external ocular muscle diplopia arises, which is homonymous when internal squint occurs, crossed when there is external squint, vertical if an elevator or depressor is affected, or there may be a combination of the last with either of the former.

Swanzy[1] declares that in "the premonitory stages of tabes dorsalis, ephemeral partial paralysis, affecting now one and again another of the orbital muscles, may sometimes be observed;" and Jeffries[2] says: "In tabes, as has long been known, there has been frequently a history of transitory diplopia during the prodromal period. The origin of these fugacious paralyses is not known, but their significance, when combined with previous syphilitic infection, is gravely suggestive of tabes to follow." All authorities agree that diplopia is not an infrequent early symptom, though they differ somewhat in regard to the percentage of cases showing this condition. Spitzka,[3] for example, found it in 58 out of 81 patients recorded, and Berger[4] in 38 per cent. of his cases, while Erb[5] assigns 27 per cent. of eye-paralyses to tabes, and Moli[6] 39.6 per cent. Sometimes the paralysis comes on gradually and is not noticed by the patient, but more often it causes very annoying diplopia. This may be the first symptom to attract the patient's attention, as in a case that I saw some time ago, in which, however, the patient, upon examination, also exhibited loss of knee-jerk, some ataxia, and slight pains, with the light-reaction of the pupils preserved, but sluggish. Osler[7] says: "The early ocular palsies are of the greatest importance. A squint, ptosis, or Argyll-Robertson pupil may be the *first* symptom, and may exist with the loss only of the knee-jerk." Nettleship[8] also states that tabes may be preceded by paralysis of one or more muscles, and that "there may be for years nothing else to attract attention." Cromwell[9] states that in tabes dorsalis the paralysis (of the eye-muscle) often precedes the other symptoms some months, and, at times, years." This condition occurs very rarely, if at all, in any other form of spinal disease. The importance of this as an early symptom may be inferred from the declaration of Schmeichler[10] that "if a pupillary disturb-

[1] Ibid., p. 850. [2] Op. cit., p. 454.
[3] Journal American Medical Association, February 18, 1893, p. 168.
[4] Op. cit. [5] Brain, April, 1882, p. 34.
[6] Transactions Medico-Chirurgical Society, London, 1879.

[1] Diseases of the Eye, 3d ed., p. 432.
[2] Boston Med. and Surg. Journ., Oct. 27, 1892.
[3] Pepper's System, vol. v.
[4] Op. cit., p. 484.
[5] Deutsches Archiv für klinische Medicin, 1879.
[6] Archiv für Psychiatrie, Bd. xiii, Heft 3.
[7] Practice of Medicine, p. 842.
[8] Diseases of the Eye, p. 452.
[9] Amer. Journ. of the Med. Sciences, April, 1884.
[10] Op. cit.

ance is added we are compelled to suspect tabes, and if lancinating pains appear the diagnosis of posterior spinal sclerosis may be accurately made." Pearce[1] reports a case, in the service of S. Weir Mitchell, of rapid onset, with sudden diplopia, due to paralysis of both external recti, as the first symptom. Hansell[2] cites one in which diplopia was the first symptom observed by the patient, and examination showed an Argyll-Robertson pupil, with the optic nerve normal, the knee-jerk exaggerated, and an absence of ataxia and of pains.

Hughlings Jackson found diplopia to be the first symptom in 6 out of 19 cases.

Ptosis, either unilateral or bilateral, occurs at times as an early symptom, and not infrequently is associated with paralysis of one or more muscles of the eyeball. Six months ago a patient consulted me because of a slight drooping of the upper lid of the right eye. He gave a history of syphilis, and upon close inquiry said that he had sharp pains at times in his legs, and occasionally had "bladder-trouble," with pain in the epigastrium, frequent micturition, and scanty urine. (Urine-analysis was negative.) Argyll-Robertson pupil was present, but there was no ataxia, and the knee-jerk was normal. Vision was normal, as were also the fields for form and color. Two months later the man returned, complaining of diplopia, which was found to be due to paresis of the right internal rectus. Despite the normal patellar tendon-reflex and the absence of ataxia, I am inclined to believe this a case of beginning tabes.

There seems to be a general impression among neurologists that paralyses of the eye-muscles, as manifested in ptosis, diplopia, and reflex iridoplegia, are more common in syphilitic patients.

Sachs,[3] in a paper read before the American Neurological Association in 1893, in attempting a differentiation of the cases of tabes due to an active syphilitic process, considered among that group those that exhibited complete loss of reflex contractility of one or both pupils, and ocular palsies. Spitzka,[4] on the other hand, states that the most obstinate and most severe diplopia he has met in a tabetic patient was in one in which syphilis was positively excluded, and Berger[5] says that he did not find luetic patients to be especially disposed to ocular palsy, although they do show a greater tendency to permanent paralysis and to multiple paralyses.

As to the anatomic cause of these paralyses, Berger says the lesion is nuclear; Förster that they are due to disease in the floor of the fourth ventricle; and Schmeichler[6] that they depend upon a sclerotic process in the vertebral artery, which furnishes the blood-supply to the nuclei of the eye-muscles, as well as the other basal ganglia, and also to the posterior columns of the cord, basing his opinion upon what Adamkiewicz has shown—that the path of tabetic sclerosis is determined by the course of these arterial vessels. Sachs,[1] in speaking along the same line, says that the chief cause of the degeneration of tabes is syphilis, which causes disease of the bloodvessels of the spinal cord, and altered states of the blood may be the prime cause of these changes in the bloodvessels.

Nystagmus has been observed, but is rare. It occurs chiefly with movements of the eyeballs, and is rarely persistent in continuous oscillation, as in multiple sclerosis. Rahlway[2] speaks of having observed it late in ataxia. Berger[3] reports seven cases, one of them unilateral, and Freyer[4] one case in which this was the only ocular symptom. Knies states that these rarer forms are perhaps always due to complications.

Another symptom that should not be ignored is epiphora, which usually is bilateral, but sometimes is unilateral. It is most probably due to weakness of the orbicularis, which may be explained, says de Schweinitz,[5] by the intimate relation of the oculo-facial group of muscles to the nucleus of the third nerve, which is frequently disturbed in tabes; for, according to Mendel,[6] the upper twigs of the facial nerve spring from a separate nucleus, which is in close relationship to the oculomotor.

According to Berger, however, hypersecretion is an important causative factor—a condition that has its analogy in the hyperidrosis of the face sometimes seen in tabes.

The relationship between optic atrophy and tabes is intimate. As regards its frequency authorities differ, ophthalmologists, for example, naturally reporting a higher percentage of cases with atrophy than neurologists. At the very least, 10 per cent. of the patients with locomotor ataxia exhibit more or less of optic atrophy; Gowers says one-sixth; Erb[7] 12 per cent.; Spitzka says if we include the lesser degrees of atrophy the percentage certainly is higher; Dana,[8] 10 per cent. in his experience; Moli, 13.5 per cent.; Uhthoff[9] (nervous clinic), 20 per cent.; Berger,[10] 51 in 109 cases (46.7 per cent.); Lofmarel,[3] 49 in 102 (48 per cent.);

[1] Journ. of Nervous and Mental Dis., 1895, p. 8.
[2] Journ. of Amer. Med. Assoc., Feb. 1893, p. 168.
[3] N. Y. Med. Journ., Aug. 12, 1893, p. 192.
[4] Op. cit. [5] Op. cit. [6] Op. cit.

[1] N. Y. Med. Journ., Aug. 12, 1893, p. 192.
[2] Archiv für Ophth., vol. xxiv, No. 4, pp. 237-317.
[3] Op. cit., p. 484.
[4] Berliner klin. Wochenschr., 1887, No. 6.
[5] Amer. Journ. of Ophth., March, 1895, p. 82.
[6] Berliner klin. Wochenschr., 1887, No. 48.
[7] "Zur Pathologie der Tabes dorsalis," Deutsches Archiv für klinische Medicin, 1879.
[8] Text-book of Nervous Diseases.
[9] Archiv für Psychiatrie, Bd. xiii, Heft 3.
[10] Op. cit., p. 455. [11] Quoted by Berger, op. cit., p. 455.

Cyon,[1] 60 in 203 (29.5 per cent.); Schmeichler,[2] from the cases seen in his eye-clinic, the medical clinic, and the Home for Incurables, 40 per cent. Buzzard[3] found it more frequently in disseminated sclerosis (43 per cent.), next in tabes (15.5 per cent.) and general paralysis of the insane. Calculating the frequency of spinal disease in cases of optic atrophy, Uhthoff,[4] in an analysis of 183 cases of optic atrophy from causes outside the eye, found it to be due to disease of the spinal cord in 59 cases (32 per cent.). Charcot believed that almost all cases of so-called simple atrophy ultimately present spinal symptoms; Gowers[5] about one-half; and Galezwoski about two-thirds.

Peltesohn[6] finds about 40 per cent. of the cases of non-neuritic progressive optic atrophy in Hirschberg's clinic to be associated with spinal or cerebrospinal disease, and among 486 cases[7] he found 78 cases of tabes (15.7 per cent.). In a series of 76 consecutive cases of progressive atrophy Nettleship[8] reports decided spinal symptoms in 58, and of the remaining 18 several showed one or more symptoms that were probably of spinal origin. He is furthermore of the opinion that in the cases without signs of spinal disease, if they could be followed for a sufficient number of years, symptoms of such involvement would eventually appear.

Optic atrophy is usually an early, sometimes the initial, symptom of tabes. If the patient reaches the second stage without it, he will probably escape it altogether. There appears to be, as has been noted by many observers (Osler, Ferrier, Gowers, Buzzard), what might be termed an antagonism between the optic atrophy and the ataxia. When the former is an early and decided symptom ataxia is not likely to be marked, while in the cases in which the latter symptom is present the atrophy is rare or of very slight degree. Martin[9] claims that "when blindness from atrophy of the optic nerve occurs at an early period, especially when it runs a rapid course, a slow course of tabetic symptoms proper may be expected." Benedikt[10] is of the same opinion, and says that "it is a rule without exception, so far as my experience goes, that motor tabetic symptoms subside, however severe they may have been, as soon as atrophy of the optic nerve begins. The latter symptom, however, presents a very unfavorable prognosis." It may occur before any symptoms referable to the cord, as in a case mentioned by Gowers, in another by Bramwell,[1] and in seven cases by Berger.[2] Buzzard[3] records a case of not infrequent type, in which the only other symptom was loss of knee-jerk. The atrophy sometimes continues for years without any other symptoms.

Berger says that cases with ocular paralyses are slightly more disposed to atrophy, and the converse is also true. The left eye is oftener attacked than the right. "In general, paralyses of the external ocular muscles are found disproportionately oftener in cases showing optic atrophy than in cases uncomplicated with optic atrophy;" and "the cases with paralyses of the ocular muscles are more disposed to optic atrophy than the cases without paralyses." The change is usually more advanced in one eye than in the other, but it is rare to find complete atrophy in one eye and a normal nerve in the other. Schmeichler says that he has "never observed in tabes that one optic nerve was completely atrophic while the other eye enjoyed perfect vision."

The first result of a developing atrophy is in the color-perception, as shown by contraction of the color-fields when measured by the perimeter. Green, which excites the fibers least, is the first to be affected and to disappear; red follows, and the perception for blue is longest retained. The form-field then begins to suffer contraction and at the same time usually, or even a little earlier, vision begins to fail. Berger,[4] however, says that "contraction of the visual field precedes affection of the color-sense" and declares also that "no relation exists between the contraction of the visual field, the color-fields, the disturbances of central vision and of color-perception;" and with this opinion Leber[5] and Michel agree. My own experience does not accord with that of Berger, but agrees rather with that of Knies,[6] who holds that "central vision usually possesses a definite relation to the narrowing of the visual field, and is so much more impaired the more the boundaries of the field approach the point of fixation." Thus, optic atrophy is usually a gradual process, but occasionally it may be rapid. In the most rapid case recorded by Berger the atrophy took place in two months, and in the slowest in seventeen years. Hirschberg[7] reports a case in which vision was almost lost in eight weeks. It will usually progress to complete or almost complete blindness, with only light-perception remaining, but rarely it may advance to a certain stage and then stop. The contraction of the fields is usually concentric, though more marked at the temporal side (Förster) and

[1] Quoted by Berger, op. cit., p. 455.
[2] Archiv f. Opth., 1883, xii, p. 335.
[3] Brit. Med. Journ., Oct. 7, 1893, p. 779.
[4] Graefe's Archiv f. Ophth., 1880, xxvi, Abth. 1.
[5] Text-book of Ophthalmoscopy, p. 141.
[6] Quoted in Archiv f. Ophth., xvi, p. 142.
[7] Centralblatt f. Augenheilk., Bd. x, pp. 45, 75, and 106.
[8] Diseases of the Eye, p. 61.
[9] Arch. f. Augenheilk., 1890, p. 122.
[10] Wiener med. Wochenschr., Aug. 14, 1887.

[1] Diseases of the Spinal Cord, 2d ed., p. 192.
[2] Op. cit. [3] Brain, 1878, No. 2, p. 168.
[4] Op. cit., p. 460.
[5] Graefe and Saemisch's Handbook, vol. vi, p. 864.
[6] The Eye in General Diseases, p. 185.
[7] Klinische Beobachtungten, 1874.

somewhat irregular. Rarely, however, a sector-like defect is met with, as in a case reported by Gowers[1] and in one by Uhthoff;[2] or one-half of the field is lost (Gowers,[3] Treitel,[4] and Berger[5]). Central loss of vision is even more rare, but a case of this kind is reported by Gowers[6], and Berry[7] also speaks of it. Bunge[8] reports a case, but does not go into details; Althaus[9] one case; and Berger two cases, one undoubted, with peripheral contraction first and scotoma later. So rare, indeed, is this last that Förster[10] says that if an atrophy begins with a central defect or central scotoma, it indicates that "we are not dealing with a tabetic atrophy."

Although it is true, as Stellwag[11] says, that vision is not "in direct proportion to the ophthalmoscopic appearances," or, as Knies[12] declares, that "there is often a disproportion in both directions between the visible atrophy of the nerve and the disturbance of vision," yet the condition of the veins can usually be readily recognized, even before vision begins to fail much. The essential ophthalmoscopic change is the discoloration of the papilla, which becomes of a grayish or bluish-white color. Mauthner[13] contends that the earliest and most important symptom in beginning atrophy is attenuation of the vessels, but Leber says that this is true only in neuritic atrophy and not in true primary atrophy. The vessels are about normal in size, except in the very late stage, when they often become narrowed. Schmeichler says that often one or more veins, usually the lower, are larger than normal and may be even twice the normal width.

The disc appears flat or slightly excavated, with its edges sharply defined, and is of an opaque bluish-gray color, while the dots of the *lamina cribrosa* become more visible, causing a "stippling," and the minute vessels of the disc are absent.

Before concluding I shall briefly report a case in which the ocular symptoms formed an important element in the diagnosis:

A. K., aged thirty-five years, was referred to me by Dr. H. S. Upson for examination. The patient had complete loss of knee-jerk; station was bad, and the gait was markedly ataxic; but there was no pain. The diagnosis lay between locomotor ataxia and multiple neuritis. Examination of the eyes showed pupils that responded readily to light and in accommodation; the external eye-muscles were normal; the optic nerves presented not the slightest indication of atrophy. Not only was vision normal after correction of the astigmatism, but the form-fields and, what was even more significant, the color-fields were perfectly normal. As a result of the eye-examination, multiple neuritis was suspected rather than tabes; and under treatment all the symptoms rapidly improved, the ataxia disappeared, and the knee-jerk returned to normal.

In conclusion, then, we should never lose sight of the importance of the ocular symptoms in all suspected cases of locomotor ataxia, and their value both in diagnosis and prognosis. Such examination should have regard to (1) the internal eye-muscles, as shown by the size of the pupils and their mode of response to light and accommodation; (2) the external eye-muscles (including the elevator of the upper lids), which so often are paralyzed, causing diplopia or ptosis; (3) the condition of the optic nerve, which in so large a percentage of cases undergoes more or less atrophy.

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[1] Ophthalmoscopy, p. 125.
[2] Archiv f. Ophth., 1880, vol. xxvi, p. 277.
[3] Ophthalmoscopy, p. 124.
[4] Archiv f. Ophth., 1879, vol. xxv, p. 61.
[5] Archiv f. Ophth., vol. xix, p. 471.
[6] Ophthalmoscopy, p. 127.
[7] British Med. Journ., Oct. 7, 1893, p. 784.
[8] "Ueber Gesichtsfeld und Faserverlauf im opt. Leitungsapparate," Halle, 1884, p. 13.
[9] Krankheiten des Rückenmarkes, 1885, p. 104.
[10] Handb. v. Graefe-Saemisch, Bd. vii.
[11] Lehrbuch der praktischen Augenheilkunde.
[12] The Eye in General Diseases, p. 186.
[13] Lehrbuch der Ophthalmoscopie, 1868.

IS THE PHYSICIAN IN ANY WAY RESPONSIBLE FOR THE HIGH MORTALITY AMONG THE NEWLY BORN?[1]

BY M. A. CROCKETT, A.B., M.D.,
ASSISTANT GYNECOLOGIST TO THE BUFFALO GENERAL HOSPITAL, INSTRUCTOR IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO.

IN a recent address before the Society for the Protection of Children in France, the chairman, Dr. Rochard, stated that 250,000 infants perished annually, and that, in his opinion, 100,000 of these lives might be saved. The world knows that France is much alarmed over the fact that the nation is not increasing in numbers. Dr. Rochard points out that the country might be repopulated simply by diminishing this waste of infant-life. History furnishes several examples of the disastrous results following diminution of a nation's numerical strength. Infant-mortality might become a national question of great importance, and the State has a right to demand from the medical profession the causes that annually deprive her of so many lives.

In the first place, is it true that the mortality among the newly born is high? The term newly born is applied to the infant during the first month or six weeks of its existence. Eröss, taking sixteen large European cities as the basis for computation, states that 10 per cent. of children born alive die during the first four weeks of life. Oesterlen[2] states that the mortality of the first month makes up 42 per cent. of the deaths of the first year of life.

[1] Read before the Buffalo Medical Club, April, 1895.
[2] Handbuch der Med. Statistik, 1874.

Uffelmann[1] says that the mortality of the first four weeks is about equal to the mortality of the second and third years of life added together. One-quarter of all the deaths, up to the age of five years, occur in the first month of life. Smith[2] says that in England, where there is an accurate registration of births and deaths, among every 100 children born alive there are four or five deaths during the first month. He quotes a French author who places the mortality of the first month at 10 per cent.

In this country, owing to deficient registration of births, the statistics are unreliable, but all authorities agree that during the first month the mortality is very heavy. Think of the loss to a community represented by the enormous mortality of the first year of life, and then bear in mind that the first two weeks in the first month form the most critical time in this year and the very time during which the child is likely to be under a physician's observation. While there may be differences of opinion as to the exact mortality among the newly born, the facts show this mortality to be so great as to demand a positive answer to the question at the head of this paper.

Undoubtedly the mortality of the first month of life will always be high, for many of the deaths are unavoidable. There is a marked tendency, however, among physicians to ascribe to Divine Providence results brought about by their own ignorance and neglect. If it can be shown that a large number of the deaths among infants result from diseases that we usually consider preventable, we can no longer shield ourselves by casting the responsibility elswhere.

To learn anything definite about the newly born a large number of children must be studied. Eröss,[3] of Budapest, has recorded observations of 1000 infants. These children were examined twice a day and sections were performed upon all that died. Upon each visit the temperature was taken, with the striking result that in 430 of the children fever-temperatures were noted. Being surprised at this, Eröss used the thermometer among his private patients. He selected forty-two infants that were so situated as to receive the very best of care, and in twelve instances found fever present. He states that in most of these children the rise of temperature was the first sign of disturbance, and without the use of the thermometer his attention would not have been attracted to the infant. The lesson from this is obvious.

In 79 of the 430 feverish infants no cause for the elevation of temperature could be found; 220 presented evidences of disease of the cord or navel; 108 suffered from dyspepsia or intestinal catarrh, which, in many of the cases, was due to septic infection. Other diseases found among these 430 were bronchitis, pleuritis, peritonitis, meningitis, etc. This report of Eröss is full of valuable information, but the important facts for us are that 220 children showed disease of the cord and that many of the other diseases were those in which we recognize infection as a cause.

The same authority,[1] in another article, reports the results of observations upon 1000 children regarding diseases of the navel and the infections resulting; 680 infants presented some abnormality in the healing of the navel-wound; this abnormality, in many instances, being associated with serious disease of the organism.

It is now generally admitted that septic infection plays a most important *rôle* in the loss of life among the newly born. Epstein[2] says that much may be done to diminish the death-rate from pyo-septicemia in the newborn, which is too common even in private practice and under the most favorable surroundings. The most common entrance for septic matter is the umbilicus.

Fischl,[3] from a careful study of histories, sections, and bacteriology, in twenty-two newly born, comes to the following conclusions:

1. During the first few weeks sucklings are not uncommonly infected by septic microbes. The clinical and anatomic signs of this infection may be those of an acute or subacute gastro-enteritis, capillary bronchitis, or lobular pneumonia.

2. The grounds for classing these diseases in the group of septico-pyemias of the newborn is the close similarity, in histologic and bacteriologic conditions, between these affections and those diseases that, both clinically and anatomically, pass as septico-pyemic.

3. The histologic character of the organic changes consists in necrosis of cells and interstitial inflammation, with a tendency to hemorrhages. The microscopic changes in the mucous membrane of the gastro-intestinal canal may be slight or entirely wanting, even in cases in which the symptoms are most severe.

4. By means of culture-tests and inoculation-tests, streptococci aud staphylococci are found in various organs, especially in the lungs.

5. The paths of infection are the navel-wound, with or without alterations in its healing, the food, and inspiration. The latter way is one of the most common and leads to the development of prominent pulmonary symptoms.

[1] Handbuch der privat. u. œffentlich. Hygiene des Kindes, 1884.
[2] Diseases of Children.
[3] Archiv für Gynäkologie, Bd. xliii, H. 2.

[1] Archiv für Gynäkologie, Bd. xli, H. 3.
[2] Jahrbuch für Kinderheilk.
[3] Zeitschrift für Heilkunde, Bd. xv, H. 1.

6. Acute dyspeptic diseases and genuine pneumonias are rare, and their prognosis is much more favorable than when gastro-intestinal or pulmonary symptoms accompany septic infection.

Tavel and Quervain[1] describe two cases of hemorrhage occurring in the newborn in which bacteriologic investigation of the blood was made. In the first case a purulent discharge from the umbilicus was noticed a few days after birth and multiple hemorrhages occurred ten days later. The post-mortem examination showed double pneumonia, with blood-stained fluid in the pleural cavities. The examination of the blood and organs revealed the presence of large numbers of streptococci. In the second case death took place from pneumonia. Hemorrhages were found in the pericardium, brain, and beneath the dura. Large numbers of staphylococci were present in the blood.

Escherich[2] says that trismus neonatorum is due to local infection of the umbilical wound. He reports three cases, in each of which there was septic inflammation of the navel, with peritonitis in one case and pneumonia in two.

Hirst[3] has reported the results of section in five children dying from septic infection through the umbilicus. In his opinion the average physician does not recognize the fact that septicemia of the newly born is common.

If the study of large numbers of newly born children and the opinions of distinguishd specialists carry any weight, we must recognize septic infection as an important factor in infant-mortality. It is also important to remember that the symptoms produced by this infection are varied and obscure.

Every newborn child has a physiologic wound. As the umbilicus is a recognized highway for infective bacteria, and may itself be the seat of septic inflammation, I make no apology for calling attention to this small area of the body.

Normally,[4] the amniotic sheath of the cord ends at a ring of skin upon the abdomen, but Wharton's jelly continues down to the subcutaneous and perivascular connective tissue. After the dead stump is cast off the umbilicus should heal by granulation, like any other wound. There are, however, certain reasons why infection is easy and the results serious: (1) the position of the navel-wound and its close relation to the peritoneum; (2) it contains the mouths of three large vessels; (3) its contact with moist, dead tissue.

There are certain anomalies that result in producing a large wound or disturb its healing. The most common of these anomalies are prolongation of the skin upward upon the cord, continuation of the amnion upon the abdomen, and a fleshy core projecting into Wharton's jelly.

Among a thousand infants Eröss found 22 per cent. suffering from navel-infection. Last year Doktor, of Budapest, showed how this percentage of infection could be lowered by more careful attention to the dressing of the cord. He studied 1200 children before he arrived at a satisfactory result. He found the following to be the best method: With a sterile ligature the cord is tied as close to the abdomen as possible, and with sterile scissors cut close to the ligature. Aseptic cotton is applied, and the dressing is not touched for three days. After the third day the dressing is changed every other day until the stump has dropped off. To insure rapid mummification the child is not bathed until the stump has separated, after which time there are daily bathing and dressing of navel. The care of the cord is carried out with the customary surgical details as to antisepsis, and is intrusted to the physician instead of the nurse; 230 children treated in this way showed a diminution of navel-infection from 22 per cent. to 3.46 per cent. Epstein condemns moist dressings and antiseptic powders. The navel-wound should be treated on ordinary surgical principles, namely, asepsis and avoidance of irritation. The physician has no right to leave this matter entirely to the nurse.

It is true that the traditions of a hundred years are violated by postponing the first bath for several days, but this causes no harm to the child. Doktor found a proportionately greater increase in weight and less skin-irritation in infants whose bathing was deferred. In this connection some observations of Liebreich[1] are interesting: "The *vernix caseosa*, which has hitherto been regarded as superfluous filth, cannot be taken as such. It is not a glycerin-fat, but consists of cholesterin-ether. This substance is germ-proof and air-proof. From this we conclude that Nature has given the child a natural protection against bacterial infection. The first bath should allow a reasonable amount of vernix to remain as a protection to the pores of the skin."

There does not seem to be much danger of hemorrhage in tying the cord so close to the abdomen, as in only one case in one-hundred did Doktor notice even slight oozing.

When the lying-in woman shows signs of sepsis, usually some one is to blame. During and after confinement we observe every antiseptic precaution, and, not content with this, on each visit we take the mother's pulse and temperature, recognizing the fact that forewarned is forearmed. Does the child usually receive so much attention from the physician? Its care is the province of the nurse,

[1] Centralblatt für Bakteriologie.
[2] Wiener klinische Wochenschrift.
[3] THE MEDICAL NEWS, Jan. 9, 1892.
[4] Doktor: Archiv für Gynäkologie, Bd. xiv, H. 3.

[1] Medical Record, April 23, 1893.

perhaps an incapable one at that. Information about the child filters through the nurse or the mother to the physician. If the baby becomes ill enough to attract some one's attention, the doctor examines its condition, and perhaps discovers a disease already well advanced. The physician has never seen a case of septic infection in a newborn child for the same reason that the old practitioner never saw a ruptured perineum. Diseases of the newly born form a *terra incognita*, because the physician does not take the trouble to observe. Eröss found that out of 496,000 deaths of newly born children 45,000, or 9½ per cent., were ascribed to congenital weakness. What more need be said to support the charge of ignorance and neglect on the part of the medical profession regarding the newly born? Exact observation shows that very many children become ill during the first eight or ten days of life, and that the term congenital weakness is on a par with heart-failure.

The baby's life is held too cheaply, and too often the term "little stranger" expresses the feelings of the physician toward the newborn child. During pregnancy and confinement we are constantly reminded that we have charge of two lives, and after delivery the responsibility is in nowise diminished.

Instruction in our medical schools is lamentably deficient on diseases of the newly born. Can any recall many clinics devoted to this subject? In view of the high mortality among young babies are our schools not bound to furnish better instruction on this subject?

Long custom has intrusted the care of the newborn child almost entirely to the nurse. Cutting the cord and handing the child to the nurse are often a ceremony of great solemnity. To the mind of many a physician it represents the severance of his responsibility from the child and the formal transfer of his duties to another. There must be a reform in this matter. The first step toward saving these children's lives is the awakening of a proper appreciation regarding the physician's responsibilities. I need merely remind you of the brilliant results obtained from the proper *medical* care devoted to the healing of the umbilical wound alone.

I am aware that I have by no means exhausted this subject. It would be perfectly proper to go back to the time of labor and show how the lack or improper use of obstetric measures may result in bringing forth a child in poor condition to begin the battle of life. That part of the subject is large enough to furnish an essay by itself.

I will conclude by summing up some of the conclusions that seem to be justified by facts:

(1) The mortality of the newly born is both absolutely and relatively disgracefully high.

(2) Septic infection causes a part of this mortality, and is preventable.

(3) Asepsis should be observed about the newborn child. Dirty fingers or instruments should not be introduced into the child's mouth in cases of asphyxia. The child should not be allowed to ingest pus with its milk.

(4) The navel should be treated on modern surgical principles and have the personal supervision of the physician.

(5) The physician should take the child's temperature as well as that of the mother, bearing in mind that many of the septic diseases have an insidious approach, and that the importance of the thermometer cannot be overestimated.

(6) The navel-wound may be the path of infection without showing signs of local inflammation.

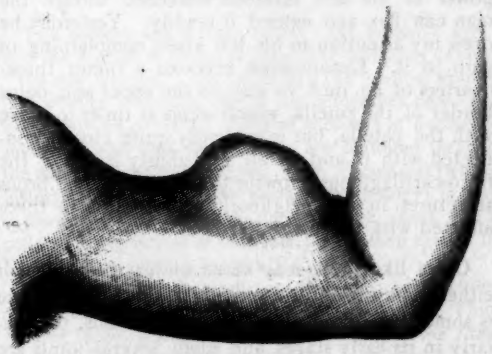
(7) Close observation of the newborn infant will teach the physician much and benefit the child greatly.

RUPTURE OF THE LONG HEAD OF THE BICEPS BRACHII MUSCLE ASSOCIATED WITH RHEUMATOID ARTHRITIS.[1]

BY G. G. DAVIS, M.D., M.R.C.S. ENG.,
SURGEON TO THE GERMAN AND ST. JOSEPH'S HOSPITALS, PHILADELPHIA.

RECENTLY two cases of rupture of the long head of the biceps muscle of the arm came under my notice which are of interest to physicians as well as to surgeons. Their histories are as follows:

The first case is in a laboring-man, aged thirty-seven years, who has had pain in the left hip and leg and right shoulder-joint for the past six weeks. The trouble in the hip and leg was painful and annoying, but has improved somewhat. The pain in the shoulder, on the contrary, has been very marked, and so disabled the patient as to cause him to apply for treatment. He has but little power in the arm.



Six days ago he noticed a lump on his right arm, which became more marked when the elbow was flexed. He states that he has no knowledge of having strained the arm in any way, and is not able to connect the appearance of the lump with any muscular effort. On examination the shoulder appears somewhat atrophied, and distinct grating can

[1] Read (and Patients Exhibited) before the College of Physicians of Philadelphia, May 1, 1895.

be felt and heard when the head of the humerus is rotated. On contracting the biceps muscle and flexing the elbow a marked lump occurs instead of the gentle swell of an intact muscle. This mass is evidently composed of that portion of the biceps attached to the long tendon. The unaffected portion of the muscle attached to the short tendon can readily be seen and felt to the inner side. The upper portion of the lump diminishes in a fusiform manner into the long tendon, which can be felt as a rounded cord disappearing in the axilla beneath the edge of the deltoid muscle. The shape of the enlargement varies according to the amount of the contraction of the muscle. The accompanying sketch shows its customary appearance. (See figure.)

The second case occurred in a blacksmith, aged sixty years. When twenty-five years of age he had an attack of rheumatism, which began in the feet and then involved the knees and hips. He was confined to bed for four or five weeks. At this time his arms were not affected. Nine months ago he was seized with pain in the right shoulder, which was so severe as to prevent him from sleeping and to deprive him of all use of the arm; so he stopped work, and has done none since. The pain lasted two months, and during this time there was nothing unusual seen about the arm. Four months ago, while under the care of Dr. Goodman, he noticed a lump on his right arm above the flexure of the elbow. This came without his knowledge, and did not supervene on any violent exertion. On examination the shoulder-muscles are seen to be atrophied, and the lump is evidently the long belly of the biceps muscle. Its upper portion can readily be felt to be prolonged into the long tendon, which disappears under the edge of the deltoid. The creaking and grating in the shoulder-joint, at first present, have now almost gone; the pain, though lessened, has not entirely disappeared. The power of the arm is much weakened, though the man can flex and extend it readily. Yesterday he drew my attention to his left knee, complaining of pain in it. Examination revealed a tumor, three-quarters of an inch in size, at the upper and outer border of the patella, which seems at times to move with the patella, but is evidently quite closely connected with it and in all probability is one of the fibro-cartilaginous growths that occur in the fibrous structures in the neighborhood of joints in those affected with rheumatoid arthritis.

Cases like these may come under the notice of either a physician or a surgeon. When the disease is somewhat obscure in its manifestations, particularly in its early stages and when several joints are affected, the patient, thinking he has rheumatism, is likely to apply for treatment to a physician; when, however, the local symptoms are marked, particularly if confined to a single joint, then he is likely, as did these two patients, to apply to a surgeon.

Rupture of one of the tendons of the biceps muscle is not particularly uncommon; four of such cases have come under my notice. Three were of the long tendon and one of the tendon of insertion at the bend of the elbow. The rupture is likely to occur either suddenly from violent exertion, or it may only be made known by the finding of an unusual lump at the seat of the muscular swell of the biceps in a patient suffering from disease of the shoulder-joint.

The tensile strength of healthy tendon is so great that it is my belief that true rupture is much rarer than is usually supposed, and that when a tendon does rupture it is very likely to have been diseased. Some cases that result from violent muscular contraction are, in reality, tearing loose of tendons from the muscular or bony tissue. One of the four cases I have seen was of that character. The patient was a young man, an athlete, who, while warding off a blow in sparring, felt a pain in the tendon of insertion of the biceps above the elbow, with loss of power in the arm. Dr. Beates, under whose care he was, stated that the belly of the muscle was drawn up, while the tendinous lower end could be distinctly felt with the fingers lying beneath the skin to the inner side of its normal position. By gentle manipulation the man was able to bring the lower end of the tendon opposite to the upper end, which was also gently pressed down into position, and by means of a suitable dressing the parts were retained in place. I saw the patient many months afterward, when union had occurred, and he had such good functional results that he ventured again to put on the gloves. The cause of the rupture in this patient undoubtedly lay in the pathologic condition of the muscle, because he was at the time of the injury muscle-bound, and had been for some time. Had the tendon itself been ruptured its lower piece would have been too short to be manipulated as it was. Rupture of tendons occurs in children with extreme rarity, their tissues not yet having begun to degenerate.

Bryant[1] details the case of a boy, aged eight years, with rupture of the biceps femoris tendon at the point of insertion into the fibula. Here again it is the point of junction of the tendon with the part to which it is attached that is involved, and not the tendon itself.

The cause of rupture of tendons is usually their being weakened by the disease variously known as rheumatoid arthritis, arthritis deformans, rheumatic gout, osteo-arthritis, etc. Robert Adams,[2] to whom we are indebted for our most accurate knowledge of this disease, describes the condition that it produces as follows: "Should we have an opportunity of examining the anatomical conditions of the tendons in and immediately around the shoulder-joint in any case in which the disease had existed in an

[1] Surgery, vol. ii.

[2] Rheumatoid Arthritis, 1873.

early stage, we shall find that these structures resemble tendons which had been for a long time macerating, and that they have their fibers widely separated from each other, as if they were about to resolve themselves into their primitive elements." (P. 97.) "As to the tendon of the biceps, except in those cases in which an opportunity is afforded to us of examining a shoulder-joint in which the disease is of an early stage, we usually observe that the whole of the intra-articular portion of it has been removed. The remains of the portion of the tendon of the biceps external to the capsule will be found to have contracted firm adhesions to the summit and edges of the bicipital groove." (P. 98.)

Rheumatoid arthritis is not a rapidly fatal disease, and just as Mr. Adams, as quoted, attributes absorption of the biceps tendon to a late stage of the disease, so likewise do his successors. That the tendon does rupture, and does become absorbed, is alluded to and well recognized by some writers, although many descriptions of this disease in medical works fail to make reference to this fact; but they universally associate it with more or less disorganization of the joint, and cause it to be considered as a late phenomenon in the progress of the affection. The contrary is true. It is likely to be a comparatively early symptom. Long before the marked change occurs that one sees in the familiar illustrations in the text-books the continuity of the tendon may be destroyed. In the first case reported here the disease had only been present for five weeks when the rupture occurred, and that, too, without the patient being cognizant of it, thus showing that the solution must have been nearly or quite complete. In the second case the disease had existed only five months when the rupture occurred. This is comparatively early, considering that the disease lasts for many years. In both patients the disorganization of the joint could not have been so very extensive, considering the slight restriction of motion that existed. In some cases the affection seems to involve the interior rather than the exterior of the joint, and the changes proceed outward. One can readily see why the biceps tendon, lying inside of the capsule, and only separated from the main joint-cavity by a synovial sheath, should be early affected and destroyed.

The line separating cases of rupture due to violence from those due mainly to disease is not always so sharply marked as the three cases detailed would seem to indicate. This is shown by the fourth case, which I saw some years ago. It occurred in a man advanced in years, and supervened on some violent exertion. He was, however, the subject of rheumatoid arthritis, and it is likely that in his case the tendon had been somewhat weakened by the disease and was partly absorbed, so that when the violent contraction of the biceps occurred it caused the weakened tendon to break. Is it not possible that the fibrous and tendinous insertion of muscles, particularly those inserted close to the articulations, may become affected by rheumatoid disease and so weakened as to cause their rupture without other appreciable signs of the disease? I am inclined to think so.

Bryant[1] says: "When one tendon breaks the other usually follows at a later date, thereby clearly indicating that they give way from some disease which affects their elasticity." Dr. J. Roberts Bryan informs me that he had a patient advanced in years who sustained a rupture of the quadriceps tendon just above one patella, which was followed several months later by rupture of the tendon on the opposite side at the same place; yet no other evidences of rheumatoid disease were present. If it is a fact that such cases are due to a weakening of the tendon by rheumatoid disease, it indicates the desirability of advising the patient to guard against any sudden, violent muscular effort, and may give us some clue to a correct prognosis as to the future course of the affection.

E. Pagenstecher[2] reports two cases of rupture of the biceps muscle, one occurring in a strong, muscular man while lifting a quarter of beef, and the other in an athlete. The histories are not complete enough to judge as to the causes favoring their occurrence.

255 SOUTH SIXTEENTH ST.

ORIGINAL ADDRESS.

THE AMERICAN MEDICAL WOMAN.[3]

BY FRANCES EMILY WHITE, M.D.,
OF PHILADELPHIA;
PROFESSOR OF PHYSIOLOGY IN THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

THE present age is often called "the woman's age," and the woman of to-day is somewhat dubiously dubbed "the new woman." But, although the medical woman is a woman of to-day, she is not altogether new—not absolutely *fin de siècle*. Isolated accounts of doctors of medicine who were also women are scattered through the medical annals of all ages. Even Æsculapius (whose history is obscured by the mists of mythology) is said to have been followed by disciples of both sexes, and a college of physicians of both men and women existed in Egypt in the eleventh century B.C.

Women skilled in medicine also play conspicuous *rôles* in the great dramatic poems of the Greeks. Thus Homer, in describing one of the characters of the *Iliad* (Prof. Blaikie's translation), says:

> "A leech was she, and well she knew
> All herbs on ground that grew."

From the eleventh to the thirteenth century, A.D., the famous school of Salerno (said to form the bridge

[1] Surgery, vol. ii, p. 292.
[2] Berliner klinische Wochenschrift, April 22, 1895.
[3] Address delivered to the graduating class of the Woman's Medical College, in the American Academy of Music, Philadelphia, May, 1895.

between ancient and modern medicine) boasted several renowned women-lecturers, and from that time to the present women have occasionally held chairs in various medical schools of Italy.

France, also, has accorded royal recognition to her distinguished daughters, Mesdames Boivin and Lachapelle—names familiar to all readers of medical literature.

But to the women of America, aided and abetted by justice-loving and generous American men, belong the distinction and the responsibility of inaugurating the first systematic effort toward the annexation of the medical field to the somewhat restricted territory recognized as lying within the legitimate sphere of woman.

During the colonial period, much of the medical practice in New England was in the hands of women whose sole qualifications are said to have been acquired in the rearing of large families, and there is no record of any serious conflict between the two kinds of activity. But as the practice of medicine became more scientific, there was an increasing tendency toward its restriction to those who had received a scientific training, and the practice of midwifery thus passed out of the "sphere of woman." But the promise and potency of the medical woman of to-day were latent in the conditions of the colonial age, and the Pilgrim mothers (who, as wittily pointed out by one of their remote sons, a citizen of Philadelphia, not only endured the common hardships of the period, but also endured the Pilgrim fathers), those dauntless daughters of an exigent situation, were the logical as well as chronological predecessors of women destined to share both the burdens and the privileges of American, medical, professional life.

In the history of the slow and difficult development of the untrained American midwife into the educated and legally qualified doctor of medicine the year 1849 must ever remain luminous—a red-letter year—the year in which Elizabeth Blackwell acquired the degree of Doctor of Medicine in an American school—the Medical College of Geneva, New York. In being the first woman in America to receive the medical degree, Elizabeth Blackwell unwittingly became the mother of us all—"the baby figure of the giant mass of things to come"—for tradition has it that the difficulties that she had encountered and the grave uncertainties that hung around the future of other women-aspirants for the medical degree first turned the minds of certain men and women of Philadelphia toward the unprecedented project of a medical school for women. Be this as it may (for the fruitful germ of this enterprise has been ascribed to more than one source), the coming event cast its shadow forward upon the retreating footsteps of this herald of a new evangel for women as she passed through Philadelphia on her way to Europe for further study; and the following year proved to be a second red-letter year in the history of the American medical woman—the year 1850—a date that adorns and dignifies the modest front of the Woman's Medical College of Pennsylvania.

There are two claimants to the distinction of being the first medical college for women in the world—the school in Philadelphia and a school in Boston, formerly "The New England Female Medical College." To this long-standing controversy I am able to contribute the following facts, obtained (in the case of the party of the other part) by myself from the archives of Massachusetts, which are preserved at the State House in Boston, guarded by the classic cod-fish (emblem of an early Massachusetts industry), and sheltered by the great gilded dome that accentuates Beacon Hill and dominates the consecrated precincts of the Common. The facts obtained from this unimpeachable source are as follows:

In the year 1848 there was organized in Boston a society of which the object was to provide women with the instruction necessary to qualify them for the practice of midwifery, which (as already explained) had long before passed into the "sphere of man." A school was opened and lectures on the subjects of midwifery and general medicine were provided. In April, 1850, this society was incorporated under the name of "The Female Medical Education Society" for the stated purpose of providing for the education of "midwives, nurses, and female physicians." But although the words "female physicians" occur in the act of incorporation, the charter did not grant the right either of appointing a medical faculty or of conferring the degree of Doctor of Medicine, and in 1856 a new charter was obtained by "an act to change the name of the Female Medical Education Society to the New England Female Medical College, and to reorganize the same." Section 4 of this act sets forth that "the trustees shall have power to appoint professors who shall constitute a medical faculty, and to confer the usual degree of Doctor of Medicine." The Medical Education Society thus became a medical college in 1856.

The charter of the Woman's Medical College of Pennsylvania was granted in March, 1850, and the first session of the school was opened the following October with a full faculty, organized for the instruction of women in the various departments of medicine, the corporation being authorized to appoint such a faculty and to confer the degree of Doctor of Medicine on graduates of the school. The college in Philadelphia thus antedates the college in Boston by more than six years, and even should the date of the incorporation of the society from which the Boston college sprung—April, 1850—be claimed as the date of the founding of the college (which seems to me wholly unjustifiable), the palm of priority must still be conceded to the college in Philadelphia chartered in March of the same year—a difference in its favor that might prove of immense importance in case, for example, some future millionaire should bequeath a fortune to the oldest medical college for women in the world. I would suggest, however, as a harmless precaution, that this future legal instrument contain the name of The Woman's Medical College of Pennsylvania in full!

Although our college had a less brilliant inauguration than the school in Boston (the Female Medical Education Society numbering more than 1500 members, many of them among the most influential citizens of New England), the subsequent history of the two institutions well illustrates the significant saying that "the blood of the martyrs was the seed of the church." The prolonged struggle of the college in Philadelphia and the lifelong devotion to its interests of a few women (two of whom were members both of the Board of Corporators and of the Faculty) have borne a rich harvest in the high standing accorded to the college by the profession at large, and in a world-wide reputation outside the profession.

The New England College, on the contrary, soon after the death of Mr. Samuel Gregory (the leading spirit both of the Society and of the Board of Trustees of the College), repudiated the broad scientific principles on which it had been established, and became merged in the School of Medicine of the Boston University—a homeopathic, coeducational school—the university itself (a *parvenu* among universities) being too little known to confer any standing on the college, which had forfeited its claim on the regular profession by selling its birthright for a mess of homeopathic pottage. In this matter the Quaker City, like the proverbial tortoise, has thus completely distanced its fleeter rival, and the persevering daughters of William Penn have quietly secured the precedence over their more demonstrative Puritan sisters.

In an admirable sketch of the practice of medicine by women, which appeared in the *International Review* for October, 1879, Dr. James R. Chadwick, of Boston, argues that, although the struggle of women to free themselves from the social fetters that have so long proved an obstacle to their pursuit of knowledge has of late been centered on the profession of medicine, the reason is not to be sought in any peculiar fitness of women for the practice of medicine, but rather in the fact that the movement has found support in certain sentiments common to all civilized communities—the sentiments of delicacy, fastidiousness, and modesty—which, Dr. Chadwick states, have been gaining in strength from the days of Queen Charlotte and the mother of Queen Victoria, both attended by midwives, while the court-physician waited in an ante-room in case of anything serious; as there are those now who, in trivial ailments, resort to a certain class of practitioners because their medicines are easy to take, but fall back on the regular profession, heroically ready to swallow anything, when the case becomes urgent.

The first impulse toward the medical education of women in this country may have been excited by the sentiment of propriety, for it appears to have been a reaction against what Mr. Gregory contemptuously styled "*man-midwifery*" that led to the formation, in Boston, of the society to which I have referred, in order evidently that the female obstetrician demanded by delicacy might acquire the education demanded by science; but to the argument from propriety was soon added another, founded on the excess of the female population—that distressing surplus, the despair of the political economist and the mockery of the moralist who regards it as the duty of every woman to marry—a surplus that in New England at that time amounted to 20,000 women, many of whom, it was urged, might find in the practice of midwifery a useful, honorable, and remunerative occupation—no small matter where 20,000 surplus, and hence superfluous, women were involved.

Whether or not the woman-doctor microbe may be traced to this source, it was about this time that the affection broke out—the germ finding a congenial *nidus* in the minds of a few women whose ambitions were not to be appeased by the sop offered by the Female Medical Education Society, however saturated with soothing suggestions of honorable usefulness and pecuniary competency; and these women demanded the opportunity of becoming fully educated as physicians. Now, although the invasion of the medical profession by women had been opposed by the profession in Europe from a conviction (probably sincere) of the intellectual incapacity of women, the mass of the profession in America never urged this point (for what reasons I will not undertake to explain), but based their objection (also probably sincere) on the totally different contention of impropriety[1]—a fatal mistake—for as the community gradually awoke to the necessity of regarding the question of propriety from the point of view of the woman-patient rather than of the woman-doctor, the argument from propriety veered to the other side of the question, and those who had urged it against the study of medicine by women were quite unexpectedly "hoist by their own petard!"—the supposed antitoxin only served to increase the virulence of the infection.

I would that something of the history and motives of all the women concerned in precipitating this agitation upon an innocent and unsuspecting profession might be known to every graduate and student of medicine present; but, among the number, the names of Elizabeth and Emily Blackwell and our own Ann Preston, of blessed memory, whose works do follow her, stand pre-eminent—for in this opening professional vista their prophetic souls seized on a more alluring anticipation than the mere preservation of propriety, however desirable this may have been deemed—and on a more blessed benefaction than a merely remunerative occupation for a few women; they descried for women an avenue of escape from the physical deterioration and intellectual inanition that ever lie in wait for the unoccupied—an outlet into an invigorating atmosphere of activity in which the possibilities of realizing the potential plenitude of her being as a member of the human hierarchy would be multiplied almost by infinity.[2]

That the social environment plays a conspicuous part in all phases of social progress is a commonplace of social science, but that a certain degree of adaptability on the part of the individual is also essential is an equally controlling principle in evolution.

The single element of a public sense of propriety (upon which Dr. Chadwick would put the entire *onus* of this movement) could never alone have led to the establishment of women in the medical profession. In order that a professional field may be successfully occupied by women, it must offer the following conditions:

1. The work required must come within the scope of their abilities—physical and mental.

2. It must afford opportunity for the exercise of the qualities generally described as "peculiarly feminine."

3. It must make such demands on both the physical and mental energies of women as shall serve to develop these energies in a satisfactory degree.

4. It must afford such pecuniary compensation as shall enable those who pursue it to devote their best efforts to the work, which must therefore be acceptable to the community.

That the medical profession fulfils these conditions in a high degree is proved by the fact that there are more than three-thousand women in this country alone engaged in the practice of medicine to-day—many times

[1] See article by Dr. Mary Jacobi in Woman's Work in America. New York: Hoyt & Co., 1891.

[2] See address by Elizabeth and Emily Blackwell, "Medicine as a Profession for Women," 1859; also "Reply to Manifesto of the Philadelphia County Medical Society," by Ann Preston, Medical and Surgical Reporter, Philadelphia, May 4, 1867.

as many as of those engaged in all the other professions put together.[1] But the conspicuous success of women in this as compared with other professions can only be attributed to a "peculiar fitness" for the work of the medical profession—to the lack, in other professions, of equal opportunities for the exercise of those qualities that have become specialized in women—the "peculiarly feminine" qualities—and Dr. Chadwick's reasoning evidently fails as an explanation of the woman-doctor.

Notwithstanding the existence in this country at the present time of from thirty-five to forty coeducational medical schools, the greater number of women now practising medicine here are graduates of schools exclusively for women, although the number of women's colleges of recognized position is only four. The coeducational schools include the medical departments of eleven universities—those of Michigan, Iowa, Minnesota, Colorado, California, Oregon, Buffalo, Syracuse, Boston, the District of Columbia, and the Johns Hopkins University of Baltimore.

The preference shown by women for schools attended exclusively by women might be variously interpreted as depending, perhaps, on geographic convenience, on favorable financial conditions, or (as the licence to practise as well as a medical education can be obtained only at a medical school) on less exacting educational requirements.

On the point of geographic convenience, I will cite the fact that of the nineteen women practising medicine in the State of Washington only one is a graduate of the Willamette University, in the neighboring State of Oregon. The geographic argument is thus disposed of.

The financial reason also fails as an explanation, as in the universities that receive State support the fees are notably less than in the colleges for women.

On the third point—that of educational requirements—investigation has disclosed several facts that bear on it:

1. That the required term of study in the colleges for women is longer than in most of the coeducational schools—our own college and the college of the New York Infirmary having been among the first in this country to lengthen the college-year and to increase the term of study to three and later to four years.

2. The results of competitive examinations for hospital-appointments, of examinations by State boards and for admission to State societies all show that women rank with the best when subjected to this test.

At the first examination held by the State Board of Maryland, in 1893, the highest percentage was made by the only woman presenting herself—a graduate of the Baltimore school for women; and in September last, at the State examination in New Jersey, a graduate of our own school took the highest rank. The records of competitive examinations for medical service in the Philadelphia and Polyclinic Hospitals in this city afford similar testimony. Thus the argument of less exacting educational requirements also breaks down as an explanation of the preference shown by women for their own exclusive schools.

[1] These figures were obtained from Polk's Medical Register of the United States for 1893. A recent census-report places the number at a little more than five-thousand.

The choice of a college is undoubtedly influenced by the clinical opportunities afforded in the localities concerned, and by the professional reputation of individual members of the various faculties. As to how much depends on the absence of male students—the degree of probability that inferior advantages and greater expense would be outweighed by this circumstance—must be left to the judgment of my hearers. A conclusive estimate of the influence of this factor could be reached only by a *consensus* of the views of those actually concerned—the students themselves; but in view of the general American confidence in the coeducational system (although it will be admitted that medical coeducation presents some exceptional features), taken in connection with the fact that most female students attend the clinics of the public hospitals where male students are also in evidence, notwithstanding that the clinic affords the supreme test as regards the difficulties of coeducation, the inference seems justifiable that the schools for women offer better advantages than can be obtained in the coeducational schools.

As the great medical schools of Philadelphia, New York, and Boston do not admit women, the only basis of comparison with these schools is that afforded by the statistics of results of competitive and other test examinations to which reference has been made and which bear especially upon these particular schools, as they are in the localities where such examinations are most in vogue; and these statistics undoubtedly warrant the conclusion that the best of the women's schools compare favorably with these leading schools for men. The medical department of the Johns Hopkins University (to which the admission of women was secured by a *tour de force* in the guise of a third of a million of dollars supplied mainly by one woman) is of too recent date to throw much light on the question under discussion. This college opposes more rigid requirements to the entrance of students, and offers a more advanced schedule of study than any other medical school in this country, and yet, of the first class (which matriculated in 1893) one-sixth were women—a far higher proportion than is shown in the total number of medical students for the whole country—thus confirming my contention that the attendance of women at any particular school is not determined by the presence or absence of the coeducational feature.

The claim here distinctly put forward, that the medical colleges for women stand among the most advanced of American medical schools, is not based entirely on the two points thus far mentioned, viz., the numbers in attendance as compared with the coeducational schools and the statistics of competitive and other test-examinations, but also on their requirements for admission, the character of their laboratory and other equipments, the courses of study pursued, the clinical advantages afforded, the term of study required, and the hospital and other appointments secured by their alumnæ. On the question of curriculum, I may state that the Woman's Medical College of Pennsylvania and the Medical Department of the Johns Hopkins University are the only colleges in the United States, so far as known, in which work in the physiologic laboratory is required of every student, the former having been the first in this country to make this requirement.

The chief disadvantages from which medical women

in this country now suffer arise from their exclusion (during their professional career) from the work of the great public hospitals. Dr. Emily Blackwell, of New York, in an unpublished paper which has come into my hands, calls attention to the fact that these public institutions, equipped and endowed at public expense, are monopolized by men—although the hospital is no less important than the college in the training of doctors—that medical progress depends on the hospital and the laboratory, that the scientific writers and teachers, the great operators and other leaders in medicine are the hospital-men, and that the great journals are founded on hospital-records; and she adds that women, being limited to the few small hospitals that they have themselves established, are in the position of emigrants in a new territory, or, as might have been said, of the advance-guard of an invading army, compelled to build their own roads and create their own facilities as they advance.

This arraignment of the authorities who control the public hospitals is a most serious one; but in estimating the significance of the marked preponderance of distinguished men in the profession, as compared with distinguished women, the immensity of the mass of medical men, as compared with that of medical women, should not be overlooked. When the total number of great operators and other leaders in medicine is contrasted with the whole number of men in the profession, the ratio of greatness seems less distinguishing, "the gray pre-eminence of man" (which gave pause to the ambitious princess of Tennyson's imagination) becomes less overwhelming to the female medical consciousness. In spite of the disadvantages pointed out by Dr. Blackwell, the female profession boasts distinguished teachers in both the scientific and the practical branches of medicine, of which Dr. Blackwell herself is an example; brilliant operators in the surgical diseases of women, a field that presents some of the most difficult situations in surgery; skilful attendants in the maternal crisis that perhaps offers the supreme test of fertility of resource and presence of mind in the face of danger; and a shining record in the care of the insane, a specialty that demands a high degree of intrepidity and coolness, as well as of gentle and sympathetic firmness. The number of contributions by women to medical and scientific literature (judged by the ratio of writers to the whole number of the profession) is also creditable.[1] Without exaggeration, then, the medical profession may be said to show a goodly proportion of women who have "added the incident of learning to the accident of brains."

The medical work actually done by women may be regarded from two points of view: its value to the community (this depending on its quality as well as on its peculiar acceptability on account of their sex) and its value to themselves as a means of individual development, the latter being the broader, the more important view, a view in which the word "medicine" is quite overshadowed by the word "woman." Into the consideration of this aspect of the subject the scientific character of their work does not necessarily enter; nevertheless, the question as to what proportion of medical women may be classified as "regular," "homeopathic," "eclectic," etc., is one of great sociologic interest, like that of how the majority of women would vote in case of obtaining the suffrage, whether intelligently and on the side of law and order, or in the spirit of partisanship and with an eye (or both eyes) to the spoils.

In the city of Philadelphia (for many years, if not still, the *civitas Hippocratica* of America), of those engaged in the practice of systems not recognized by the mass of the profession as scientific medicine, systems the methods of which justify the opprobrious designation of quackery (which may be said to consist in using a remedy for the wrong reason or for no reason), the proportion is approximately the same for women as for men —about one-fifth. The statistics for the whole profession are not at hand, but of the entire number of legally qualified women engaged in the practice of medicine in the United States, made up of graduates of more than forty colleges, nearly one-fourth are graduates of the Woman's Medical College of Pennsylvania, and although I am compelled, most regretfully, to admit that this is not an absolute guaranty of the scientific character of their practice, I believe that the proportion of the alumnæ of our College who have proved true to its principles and teachings, and have thus been added to the ranks of scientific medicine, is much higher than the ratio for the city of Philadelphia.

The tide of modern medicine has set strongly in the direction of scientific methods, in which the balance and the retort, the microscope and the stethoscope, with the long list of their congeners, the thermometer, the pelvimeter and numerous other instruments of precision, the culture-tube with the measures for the exclusion and destruction of the ubiquitous microbe that have grown out of its use, and many other other sanitary measures—the results of modern study of the soil, the water, the air, and the climate—all play a conspicuous part. To this enumeration must be added the study of the lower animals and of man, by means of the multitude of modern instruments for investigation of the physiologic and psychologic problems that underlie the vast field of pathology. Any system of medicine in which the treatment of disease is based on principles and theories derived from other than scientific sources is self-condemned. So far as the medical profession is concerned, the *post hoc, ergo propter hoc* method of reasoning has had its day, and some better evidence than the recovery of the patient must be forthcoming in favor of a particular plan of treatment in order that it shall secure the serious attention of the profession; unless the relation of cause and effect between treatment and recovery can be established, we have not science, but empiricism.

In the relation which has so long existed between us of professor and student I have striven to infect your minds with the love of scientific truth; but now, as this relation is about to be severed, I desire to express to you my profound conviction of the great truth that "learning is but an adjunct to ourself;" that while she who heals the sick, who makes the blind to see, and the lame to walk does well, and "though twice a woman shall be called a leech," she who exhibits in her own character the value of a broadening and elevating pursuit in the development of the liberality of mind and self-poise essential to a true appreciation of life in all its depth and fulness does better; and while students of soci-

[1] See appendix to article by Dr. M. Putnam-Jacobi, loc. cit.

ology are still perplexedly discussing the question of the desirability of an independent career for woman in the abstract, may you, individual women, each of far higher importance than any abstraction, fare bravely and womanly on to a future in which you shall have wrested from fate—the fate of the abstract woman—an assured position among the thousands of women already living enriched and ennobled lives as doctors of medicine, who are finding therein congenial occupation, intellectual growth, pecuniary independence, and a sphere of immense usefulness to their sex and hence to the entire circle of humanity that comes within the radius of their influence.

CLINICAL MEMORANDA.

THREE CASES OF RECTAL NEURALGIA, ONE WITH DOUBLE MAMMILLITIS.

BY W. F. ARNOLD, M.D.,
PASSED ASSISTANT SURGEON, UNITED STATES NAVY.

CASE I was met in the person of a rather delicate man of middle age, whose illnesses have mostly been ascribable to the common infectious diseases of the respiratory system that have been resisted with anxious difficulty, although no noteworthy sequelæ remained from any of them. He suffered severely some years ago from Morton's (pressure) neuralgia in both feet; this subsided upon the adoption of a less exacting life, without treatment, its nature appearing to have escaped observation. He is the subject of pruritus ani of so moderate a character that applications of such simple remedies as citrine ointment and an ointment of calomel twice a week have served to obviate nearly all of its inconveniences. On account of this response to agents to which I am very loath to ascribe any other than a local (and most probably a parasitic) action, I think the neurotic origin of this irritation is open to serious question. At the time of the single attack of rectal neuralgia that I witnessed, the pruritus had been in unusual abeyance; and it continued so for several months thereafter. He had gained much in weight about this time, and he frequently congratulated himself upon the beneficial effects of a recent change of climate.

This attack came on without premonition during sleep, between one and two o'clock at night; and in this manner and time of inception it exactly corresponds with the other two cases to be described, as well as in the relief afforded by the passage either of feces or of flatus even in the smallest of quantities. I found the man upon the seat of the water-closet in a state of depression, nearly pulseless, of a death-like pallor, and sweating profusely. He evinced so much pain at that time that I gave him a medium dose of morphin subcutaneously, notwithstanding his statement that it had grown distinctly less in the few minutes that had been required to summon me by the officer of the deck, who had first assisted him in a half-fainting state to the water-closet.

No further attacks were observed in the course of our service together, which continued for a year; but no antineuralgic treatment was instituted. The man thought that the attacks were becoming less frequent.

CASE II occurred in a man about forty-five years old, of pronounced athletic tendencies. There is nothing more significant in his medical history than an obstinate attack of sciatica about five years ago. His seizures have not exceeded four in all, the first having taken place nearly two years ago. They seem, from the patient's account of them, to have been milder than the one to be detailed, but he is emphatic in declaring the pain to have been agonizing in character. All occurred between midnight and two o'clock A.M. The last one or two the man relieved by an extemporized suppository, as he had noticed that the presence of anything in the lower bowel abated the pain.

In Case III the patient had suffered only two very light paroxysms of rectal pain. It is probable that they would not have been considered as characterizing a special form of neuralgia had attention not been aroused by the preceding cases. The victim is a medical man, about thirty-two years old. His history includes gastric neuralgia(?) at the age of ten, severe *tic* from exposure to cold in Glacier Bay, Alaska, and a confirmed predisposition to Morton's neuralgia in the left foot, which is kept within limits, permitting comfortable bodily activity by attending to the shape of the soles of his shoes. His health is good, although he consciously prejudices it by his persistence in sedentary employments, to the almost complete exclusion of regular exercise. There is nothing to be noted about his seizures, which he described to me minutely upon my suggesting their nature, that has not already been referred to. We agreed in declining to treat such an irregular, and, in this case, so mild a disorder.

This gentleman has been subject since early boyhood to a peculiar form of irritation of the nipples and their areolæ, which, as nearly as he can recall, is set up only by exposure to a strong, cool wind. He is reasonably certain that it is not a result of the direct, local action of a high degree of cold, inasmuch as it is not manifested at times of severe exposure to simple cold; while the protection afforded these structures by the prevailing types of apparel is certainly opposed to this assumption. Besides, he has been driven by the inconveniences experienced to adopt local protective measures that have proved to his mind to have been of no prophylactic value. The last instance of it, which he observed with minuteness, was due to four hours' exposure to a strong, topsail breeze from the northward early in April. His upper garments on this occasion—a literal wild-goose chase—were a leather shooting-coat, lined with corduroy, an otter-skin vest of southern Chinese pattern (*id est*, nearly completely double-breasted), a light flannel shirt, and a very heavy flannel undershirt.

After twenty minutes' exposure to this wind from the right rear, soreness of both nipples appeared. The sensation is described as one of rawness, which causes the patient to shrink continually from the contact of his clothing, upon which contact, however, he is confident it is in no measure dependent. He says that it is more severe than simple contact of cloth with denuded cutis would be under ordinary circumstances; and he claims for it a peculiar quality that is as invariable as it is elusive of description. No very evident tumefaction results, but a deepened color seems a constant accompaniment. Careful search has not shown that the epithelium is eroded or that any exudation of any kind takes place. Hyperesthesia to touch and to the application of universal emollient agents, such as carbolized

vaselin and glycerol, remains for from one to three days after each attack. The severity of the attack appears to be directly in proportion to the violence of, and the length of exposure to, the wind, and the duration is proportioned by the severity. Protection from the wind will arrest an attack at an early period after the inception of the initial symptoms. Naturally, inflammation here is only surmised.

Diligent inquiry has not developed a single case of this kind in either sex, save the one just related. It is perhaps desirable that I should add that there is not a suggestion of effeminacy about the subject of this, to me, unusual manifestation, which is a very real source of annoyance to its involuntary victim, who has the additional misfortune of being compelled to go to sea for a livelihood. He considers that he suffers more from cold than do the majority of the inhabitants of temperate climates. He has no theory of its mode of origin, and I have no speculations as to this that I care to express.

Regarding the rectal neuralgia, I have heard very little, and have seen even less in the commoner textbooks on the practice of medicine, although Gowers devotes a pointed paragraph to it in his *Diseases of the Nervous System*. If what I observed in Case I were frequently repeated, it might easily serve as the cause of sudden death from shock or from syncope. It may be well to state that none of these patients shows any obvious signs of gout.

U. S. S. PETREL, FOURTH-RATE, ASIATIC STATION.

SPONTANEOUS EXTRUSION OF A PIECE OF IRON THROUGH THE CORNEA.[1]

BY HOWARD F. HANSELL, M.D.,
OF PHILADELPHIA;
CLINICAL PROFESSOR OF OPHTHALMOLOGY, JEFFERSON MEDICAL COLLEGE;
ADJUNCT PROFESSOR OF DISEASES OF THE EYE, PHILADELPHIA POLYCLINIC.

THIS case presents unique and distinctive interest on account of its exceptional rarity—such a termination of a similar accident, which is recognized as a serious one, is unknown to me in my experience or in literature; and, because of its suggestion of a possible prognosis in cases of wounds of the eyeball, and of foreign bodies and their retention in its interior, that has probably heretofore not been considered. When a foreign body, such as a fragment of metal, enters the eyeball, inflammation is excited by the direct violence of the traumatism, and later by the presence of the foreign body in the highly organized tunics; and, secondly, by the introduction of germs and by the chemic changes that the substance undergoes through oxidation by the intra-ocular fluids.

As soon as practicable after the injury the magnet and other means of extraction should be employed, in order to prevent destruction and atrophy of the globe and to save the patient from the disastrous effects of sympathetic inflammation. The traumatic inflammation may cause the formation of a capsule around the foreign body, in which it may lie innocuous for many years. This fortunate outcome, however, cannot be seriously considered, and, while it exceptionally solves the problem, it does not alter the safe rule that a foreign substance in the eye should be extracted with the least possible delay and injury to the sight and to the globe.

[1] Read before the Philadelphia County Medical Society, May 15, 1895.

A. W., aged thirty years, presented himself at the outpatient eye department of the Jefferson Hospital in March, 1895, complaining of pain due to the presence of a piece of iron in the left eye. I found projecting from the most inferior part of the cornea, just above the scleral margin, a dull, black, pointed object. Palpation with a spud showed that it was metallic, as a sharp click could be easily heard and a grating sensation was felt as the point of the instrument passed over it. The pericorneal vessels were markedly injected; the cornea in the immediate neighborhood was opaque; the anterior chamber was of normal depth; the pupil was mobile and cone-shaped, the point of the cone below; the iris was attached in one or two places to the anterior capsule and to the cornea at the site of the black point; the capsule was slightly opaque, with a few streaks of opacity running backward through the lens. The patient stated that fifteen years before, while breaking rocks with a pick-axe, a minute fragment of the point of the axe flew into the left eye. Severe inflammation and partial loss of vision followed. The signs of inflammation disappeared in the course of a few weeks, to recur with greater or less severity every few months. The man assured me that this was the only traumatism that had ever happened to that eye, and that he, his medical advisers, and his friends had known that the eye contained a foreign body from the time of the accident. He had hitherto declined all suggestions to have it removed. $V = 20/50$. Accommodation and the visual field were apparently undisturbed, though these points could not be accurately determined. The man was admitted into the hospital, and, after some fruitless attempts at removal, the foreign body was extracted by dissecting it out from the cornea. A four-volt battery, strong enough to extract the iron and to distort the cornea, was of no service in dislodging the body because its rough surfaces and edges were firmly held by corneal and inflammatory tissue. The patient recovered in a day or two, with vision unchanged. The piece of iron I have the pleasure of showing you weighs a little less than two grains.

ACQUIRED PHIMOSIS, DUE TO UNSUSPECTED VENEREAL WARTS, SIMULATING GUMMA OF THE PENIS.

BY A. BRADLEY GAITHER, A.M., M.D.,
OF BALTIMORE, MD.;
ASSISTANT IN GENITO-URINARY SURGERY, JOHNS HOPKINS HOSPITAL DISPENSARY.

WHEN a case of acquired phimosis is met with, it is often impossible to tell from the clinical history just what condition will be found after circumcision has been performed. Some cases, due to hard chancre, with an induration involving the whole prepuce, and having a thick discharge from the preputial cavity, show no marked points of ulceration after operation. Again, cases with moderate preputial discharge and swelling may show extensive ulceration and excavation on splitting back the prepuce.

Acquired phimosis, due to venereal warts, is rare, and almost invariably the patient will have noticed the growths, with their gradual increase in size and number, thus giving an immediate clue to the cause of the trouble. The following case may be of interest on account of the negative history as to venereal warts, and

the clinical presence of gumma, or epithelioma, of the penis.

John D., aged thirty years, an unmarried Irishman, presented himself at the Genito-urinary Department of the Johns Hopkins Hospital Dispensary on May 6, 1895, with the following history: He denied ever having had venereal disease and had never observed a sore or growth on his penis. From childhood the prepuce had been tight, but it could always be retracted without difficulty. The man had had sexual intercourse for the last time on December 21, 1894. On January 6, 1895, he first noticed a discharge from the preputial cavity. At this time the prepuce was slightly swollen and painful, so that he did not retract it. In March he went to a hospital and was given medicine to take internally, and later an injection with which to wash out the preputial cavity. After two months' treatment, during which time his condition became progressively worse, he came to the Johns Hopkins Hospital. One year before he had had sores on the scalp and some small pimples over the body, with slight alopecia. There had been no sore-throat, headache, or pain in the limbs. The glands in both groins were indolently enlarged.

On examination, a condition of acquired phimosis was found to be present. The penis, from one cm. behind the corona to the meatus, was swollen to three times its normal size; the prepuce could not be retracted at all, and was very tense. There was a free discharge from the preputial orifice. On the dorsum of the prepuce in the median line, just over the corona, there was an excavated ulcer of the size of a small bean, with a free purulent discharge and a bad odor. The cutaneous portion of the prepuce was bright-red in color, with a sharp line of demarcation one cm. behind the corona, from which point the appearance was normal. The sensation to the touch was that of a hard, uneven mass, as if the glans penis and prepuce were adherent; yet in places there was the elastic pulpy feeling of a gumma. The edema and tension of the prepuce prevented a satisfactory examination. On irrigating the preputial cavity the fluid came slowly through the opening on the dorsum of the penis, apparently taking a roundabout course.

From the clinical appearance I was in doubt as to whether the case was one of gumma or epithelioma of the penis. On the following day, under ether-anesthesia, the prepuce was slit back in the median line, through the sinus, and the condition found to be due to venereal warts. These were countless in number, and grew from every portion of the glans penis and mucous surface of the prepuce. They varied in size from a pin-head to a cherry. Under the favorable conditions present their growth had been so luxuriant as to put the prepuce under such tension that necrosis had set in. The warts were cut off as close as possible and cauterized with nitric acid. The prepuce was then rounded off and an iodoform-dressing applied. On the subsidence of the edema it was found that a few warts had been missed. These were treated with the continued local application of fluid extract of euphorbia pilulifera, which gives very satisfactory results in this condition.

2019 ST. PAUL ST.

Dr. Benjamin S. Mackie, U.S.N., died at Philadelphia on July 25th, at the age of fifty years.

TOXICOLOGIC NOTE.

A CASE OF OPIUM-POISONING TREATED WITH POTASSIUM PERMANGANATE.

SERVICE OF GEORGE BYRD HARRISON, M.D., EMERGENCY HOSPITAL, WASHINGTON, D. C.

[Reported by JAMES R. CHURCH, A.M., M.D., of Washington, D. C.]

THE following case was the last of a series of fourteen which came under my observation while an interne at the Emergency Hospital, and, I think, presents features to make it of interest to the profession. It is the only case in which a recovery was entirely attributable to the permanganate-treatment, and was to me a most satisfactory test of the efficacy of this antidote.

M. S., a mulatto girl, nineteen years of age, was brought into the hospital at 11.30 P. M., with the history of having taken twenty-cents' worth of laudanum (probably 25 or 30 c.cm.) about two hours previously. She had several epileptiform seizures while in the ambulance and one after admission to the hospital, but was easily roused from her stupor by pressure on the supraorbital nerves. She could not, or would not, talk, but was not in a condition of absolute coma. The pupils were pin-head in size, respiration was slightly accelerated, and the temperature was normal.

The girl was treated with the usual line of opium-antidotes and antagonists, and, as coma was absent, she was given apomorphin hydrochlorate 0.005 hypodermically, which had been preceded by 300 c.cm. of a solution of potassium permanganate (0.30 to 500 c.cm. of water). Two more injections of the apomorphin were given at intervals of about seven minutes, but none of them was effective. To be certain that the lack of action was not due to the defective qualities of the drug the second and third doses were each taken from a freshly opened bottle of tablets. Shortly after the last dose the girl's condition became rapidly worse. She lapsed into coma and the pulse went up to 134 and the respiration to 26, and became stertorous. The faradic current now had little effect, and I decided to rely entirely on the permanganate, as other treatment was unsatisfactory.

The stomach-tube was passed, and, after the removal of the gastric contents and lavage with hot coffee, 500 c.cm. of the permanganate-solution were thrown into the stomach and allowed to remain about five minutes, being then withdrawn and replaced by a fresh solution. This was repeated until 2500 c.cm. of the solution had been used, when 250 c.cm., containing 0.30 of the salt, were introduced and allowed to remain. After the second washing out the girl's condition began to improve, and after the last she was aroused by the battery with comparative ease. Her pulse dropped to 104 and respiration became less frequent and fuller, and within three-quarters of an hour from the ingestion of the last 250 c.cm. of solution she was sent to the ward to bed, being then perfectly conscious and easily roused. She made an uninterrupted recovery and was discharged the next day, complaining only of slight pharyngeal irritation and general lameness, the latter due to efforts to rouse her.

The points of interest in the case are, I think, the

convulsions, which I do not understand; the bad effect of the apomorphin, which had about the influence of an equivalent of morphin, and, lastly, the entirely prompt and satisfactory rally after the permanganate was resorted to, at a time when the condition was extremely critical.

I think my treatment open to criticism in deferring the use of the stomach-pump and in not immediately using the permanganate in larger dose than the first 300 c.cm. I can unhesitatingly assert that the patient's recovery was due to the permanganate-treatment, and should not hesitate to use it in other cases in preference to other drugs.

1706 OREGON AVENUE.

MEDICAL PROGRESS.

Cerebral Softening with Hysterical Symptoms during Pregnancy.—BARBOUR (*Edinburgh Medical Journal*, June, 1895, p. 1092) has reported the case of a primipara, twenty years old, who in the fifth month of pregnancy became melancholic, and suddenly in the seventh month staggered, lost vision, and also power in the left leg, recovering, however, in a few minutes. Two weeks later a similar attack occurred, beginning with emotional disturbance, tremors, and faintness, leaving loss of power in the left arm and aphonia. On the following day six of these fits occurred, but always between them there was recovery of speech and of muscular power. The woman presented aphasia and partial aphonia, with some loss of power in the left hand. The knee-jerks were much increased, especially the left, as were also the plantar and abdominal reflexes. A month later another attack occurred, and was attended with involuntary evacuations of urine and feces, and with difficulty in swallowing from paralysis of the soft palate. There were also ptosis of the right eyelid, contracture of the right biceps, firm flexure at the right elbow, and beginning rigidity of both lower limbs. Later partial analgesia and anesthesia of both lower limbs appeared, the degree and area varying constantly. There were also marked fugitive flushings, sweating, and pallor, but no wasting. The temperature and pulse were normal. The case was treated as one of hysteria, which it was thought might be relieved by inducing labor, but uterine contractions came on spontaneously. Each pain was attended with minor epileptiform spasms, and the fetus died during the progress of labor, forceps being required for its extraction. For thirty-six hours afterward it appeared as if the woman would recover, but pulse and temperature rose, the reflexes became abolished, and the heart failed.

Upon post-mortem examination an area of softening was found on the right side of the brain, involving part of the head of the caudate nucleus and the anterior limb of the internal capsule. Many branches of the right middle cerebral artery were found to be thrombosed. An area of softening was also found in the middle of the pons, where the basilar artery was thrombosed. The kidneys contained commencing cortical miliary abscesses. The fetus presented contractions of all the limbs almost identical with those exhibited by the mother.

Coma from the Application of Carbolic-acid Compresses to the Skin.—LUCAS and LANE (*Lancet*, No. 3744, p. 1362) have reported two cases in which symptoms of intoxication resulted from the application to the skin of compresses saturated with a solution of carbolic acid. The first occurred in a boy of fifteen years, who presented several sinuses upon the right thigh as a sequel of suppuration in the course of an attack of typhoid fever. At noon a carbolic compress was applied over the seat of operation. In the evening the lad appeared sick, and at 2.30 A. M. on the following morning he was found insensible and breathing stertorously. The pulse could not be counted at the wrist, but the heart-beat was 200 per minute. The pupils were moderately small, but reacted slightly to light. The corneal reflex was absent. There was general muscular resolution, but sharp stimuli excited slight movements. Perspiration was profuse. After energetic treatment with brandy, strychnin, and hot-water bottles consciousness returned in the course of eight hours. The urine first passed was dark in color. For several days the patient felt sick and vomited from time to time. A week after the accident, when arrangements were again made to operate, a 5 per cent. solution of carbolic acid was applied on lint to the affected part for a short time. Soon the boy was noticed to be sick and suffering and the skin was bathed in perspiration. The temperature fell below normal and the pulse became scarcely perceptible. For two days afterward the urine was dark in color.

The second case occurred in a boy, six-and-a-half years old, who presented a swelling in the right iliac fossa, which it was proposed to explore. To the skin, over and in the vicinity of the mass, there was applied at 12.20 a compress moistened with carbolic lotion, one to twenty. At 1.30 the child was heard groaning and was found to be pale, collapsed, and comatose, with marked dyspnea, convulsive twitching of the eyelids and limbs. The condition improved upon injection of ether and atropin hypodermically, and brandy by the rectum and the application of blankets and hot-water bottles. The patient thereafter rapidly improved and was quite well after the lapse of several days. In this case repeated vomiting also occurred, and the urine presented a dark-green color, yielding the ordinary reactions for carbolic acid and its products in the urine.

The Bacteriology of Acute Articular Rheumatism.—SINGER (*Wiener klinische Wochenschrift*, 1895, No. 25, p. 449) has studied the urine in seventeen cases of acute articular rheumatism, with the result of finding the staphylococcus pyogenes albus in ten (and twice in the blood); the staphylococcus pyogenes aureus in one; the streptococcus pyogenes in three; and the staphylococcus pyogenes albus and the streptococcus pyogenes together in two. In one case, complicated with cystitis, an abundance of bacteria coli were found. Seven of these cases occurred in men; ten in women. Nine were severe; two moderately severe; and six mild. None presented cardiac complications.

CHVOSTEK (*Wiener klinische Wochenschrift*, 1895, No. 26, p. 469) has examined the urine in twelve cases of articular rheumatism, with negative results in nine; in the remainder the diplococcus ureæ was found in one, the staphylococcus pyogenes albus in the second, and large

plump cocci in the third. The urine in these cases was obtained with a catheter, and it is pointed out that staphylococci and streptococci have been found in the urethræ of healthy individuals. It was further insisted upon that the mere presence of micro-organisms in the urine is not necessarily indicative of any relation on their part to disease. Further examination of the blood and urine and the contents of the inflamed joints in various conditions yielded negative results in cases of rheumatism, although organisms were found in cases of sepsis and gonorrhea complicated by joint-involvement. The opinion is finally expressed that the articular lesions of acute rheumatism are not attributable to direct bacterial invasion, but to the action of toxic substances present in the blood, due directly or indirectly to the activity of bacteria.

Skin-grafting from the Lower Animals.—At a recent meeting of the Edinburgh Medico-Chirurgical Society, Mr. MILES (*British Medical Journal*, No. 1795, p. 1149) presented a communication upon skin-grafting from the lower animals. The animals used were dogs, rabbits, kittens, and frogs. Dogs were preferred, and frogs were found the least satisfactory. In all instances but one, young animals were employed. The surface of the ulcer to be treated must be aseptic, and the patient in good health. In the majority of cases granulations were planted on. The animal was killed, or pithed, stretched out, and nailed down. The flanks and abdomen were shaved and washed with an antiseptic solution. Small pieces were cut out, the largest being six inches by one inch, but mostly much smaller. The subcutaneous tissue was always taken with the skin. The grafts were pressed on the tissue close to one another, then dressed with ordinary protective and iodoform-gauze. The first dressing should be seventy-two hours afterward, and this should be done very gently; after that, every twenty-four hours, or at most forty-eight hours. Among the difficulties encountered was sloughing of a graft, usually due to too early dressing, though sometimes to hemorrhage under the graft. Apparent sloughing of the graft was sometimes seen, though, after all, the skin grew quite well. The formation of pustules was sometimes observed; sometimes granulations grew through the graft and destroyed it. Copper sulphate had been tried to prevent this, but without success, and a sharp spoon was used instead. Ulcers upon the abdomen and thorax responded less satisfactorily than ulcers situated elsewhere, on account of movement. For this reason a loose dressing is indicated.

Treatment of Prostatic Hypertrophy by Ligature and Division of the Vas Deferens.—ISNARDI (*Centralblatt für Chirurgie*, 1895, No. 28, p. 657) has reported the case of a man, seventy-two years old, who for a year had suffered with symptoms of prostatic hypertrophy, which had failed to yield to the usual therapeutic measures. Relief was afforded by ligature and division of the vas deferens. Six-and-a-half weeks after the operation retention of urine and incontinence had disappeared, and the bladder was tolerant of urine for seven hours during the night. The urine, which had previously been purulent and at times hemorrhagic, had become clear and otherwise normal. The prostate itself, which, prior to the operation was of the size of a half-nut, became scarcely appreciable upon rectal examination. The vas deferens from the point of division pursued an irregular course and was thickened and nodular in places. The epididymis was smaller than normal, particularly at its distal extremity and in its body. The testicle itself was reduced about one-half in size.

The Toxicity of the Urine in Variola.—AUCHÉ and JONCHÈRES (*Revue de Médecine*, 1895, No. 6, p. 480), as a result of the study of the urine in a series of cases of variola, found that in the discrete variety the absolute quantity of urine is variable in different cases, while the urinary curve is more nearly comparable, being relatively high in the eruptive stage, declining in the suppurative period, and again rising during defervescence. In several cases an apparent critical secretion of urine was observed. The toxicity of the urine remained about normal during the eruptive stage. It declined, and sometimes in notable degree, during the period of suppuration, the fever increasing notably with the onset of defervescence, and again becoming normal at the end of from one to three days. Often there was at this time a veritable urotoxic discharge corresponding with the urinary crisis. In cases complicated by febrile disorders during convalescence the toxicity declined, but increased with the subsequent fall of temperature. The delirium of the acute period of the disease is believed to be of toxic origin, and in one case the oscillations in the urinary toxicity were found to correspond with the mental manifestations. In hemorrhagic variola the urinary curve and toxicity were low, almost up to the occurrence of death.

The Relation of Endometritis to the Reproductive Process.—At the meeting of the German Gynecological Society, recently held at Vienna, DÖDERLEIN (*Centralblatt für Gynäkologie*, 1895, No. 26, p. 701) attributed pathologic importance to the presence in the uterine cavity of the puerpera of micro-organisms of any kind. The designations catarrhal, purulent, diphtheric, and gangrenous puerperal endometritis may well be replaced by the etiologic qualifications pyogenic and sapremic. Pyogenic endometritis is the most frequent affection of puerperal women. The profound constitutional infections occurring during the lying-in are, as a rule, attributable to this condition. The cause is most often the streptococcus pyogenes, but it may be due besides to the staphylococcus, the gonococcus, and the bacterium coli. The micro-organisms of sapremic endometritis are as yet unknown.

Influence of Ether and Chloroform upon the Kidneys.—As the result of an extended study conducted in the surgical department of the new General Hospital at Hamburg, EISENDRATH, of Chicago (*Deutsche Zeitschrift für Chirurgie*, B. xl, H. 5 and 6, p. 466), arrives at the conclusion that previously existing albuminuria is more frequently increased by ether than by chloroform; and that albuminuria is more frequent after chloroform-anesthesia than after ether-anesthesia, and in the proportion of 32 to 25. The influence of both anesthetics upon the amyloid kidney is alike. Cylindruria, with and without albuminuria, is equally frequent with chloroform-anesthesia and ether-anesthesia, but disappears more rapidly after the latter than after the former.

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CONCERNING "DYSPEPSIA."

FROM the amount of pepsin on the market we would certainly be led to believe that so-called dyspepsia is a well-defined disease. There is a sort of poetic justice about the fact that the American hog, whose lard and pork are commonly held guilty of what is often spoken of as our national malady, should now furnish the popular remedy therefor. We might almost transpose "a hair of the dog that bit you" into "a stomach of the pig that upset you," for according to the popular view at least, "dyspepsia" is looked upon as a disease of the stomach. The public knows perfectly what "dyspepsy" is and just what to take for it. Pepsin, in some form, is poured into our feeding-bottles at the dawn of our existence; it is kept upon our pantry-shelves like sugar or soda; it surges and bubbles in our soda-water; it lurks in our chewing-gum. We smuggle peptones into the economy with the bouillon that opens the banquet and in the jellies that crown its close. It looks as if the stomach would soon become a supernumerary organ, like the third molar—and the mammary gland of modern woman. Whence has arisen this deep-rooted idea? From the medical profession, of course. In fact, medical men are almost as fatuous as the community in regard to pepsin, prescribing it in every emergency as they used to prescribe calomel fifty years ago. And yet the dyspeptic is abroad in the land as never before.

We are all proud, and justly so, of the rapid strides that have been made in the pathology of disease in the last thirty years. Probably no one principle has done more to clear our diagnosis, systematize our pathology, and advance our therapeutics than that of rigidly sifting and resifting the evidence until the one organ has been found that is chiefly responsible for any given disturbance. But have we not carried the process too far in some cases? We do not refer simply to such wild-goose applications of it, as, for instance, graduated tenotomy for epilepsy, cauterization of the turbinates for asthma, or repair of the cervix for neurasthenia, but to more rational and generally accepted results of the method. For instance, it was a great advance and triumph when Bright discovered that the complexus of symptoms that bears his name was caused by disturbances of the filtration-processes in the kidneys. But does any thoughtful physician to-day regard so-called Bright's disease as primarily and essentially a disease of the kidneys? Are these organs not simply vicarious sufferers for the shortcomings of either the liver-cells or the muscle-cells, resulting in a poisoning of the arterioles in the body generally? The glomeruli simply suffer as part of the vascular system. Are we not also beginning to suspect something of the same sort in regard to pulmonary tuberculosis? We know all about tubercle anatomically, and the bacillus has become one of our household gods, a word to conjure with, an explanation for everything; but why is it that this organism has in nine cases out of ten to attack the lungs before it can pull down his prey? It effects an entrance into every part of the system, but in the lungs alone can it usually produce a fatal result. It would appear as if pulmonary tuberculosis were not so much a disease of the lungs as that the latter were a point of least resistance for the whole system.

Something of the same sort appears to be true of the disturbance of digestion called dyspepsia. We use the term "dyspepsia" simply as one of convenience, as describing not a disease, of course, but a well-known group of symptoms, usually referred to the condition of the gastric mucous membrane and contents. There can be little question that the stomach has been held responsible for far more than it deserves. In the first place, many of our

worst dyspepsias are really, to coin a term for the moment, "dystrypsias," and dependent upon enteric and pancreatic disturbances; others again are of hepatic and even cholecystic origin; while most cases of "gastralgia" are really anginal and of cardiac origin. But apart from all such confusions, is the stomach or its contents essentially and solely responsible in the large class of dyspepsias that are of "gastric" origin? Our enthusiastic bacteriologic friends say yes at once; the contents alone are to blame. Tell them what germ has been ingested with the food and they will be able to state in advance what form of indigestion will result. They are now seriously proposing a classification of gastric troubles, lactic, butyric, gaseous, and yeasty dyspepsias, according to the germs that give rise to these various fermentations. *Gastritis oidica albicans*, *gastritis torulosa*, sound well, but we think there are valid objections against regarding the gastric mucosa as simply a culture-plate for germs at the sweet will of the latter. On the other hand, the medical man is also inclined to blame the contents of the stomach, as his first question usually is, What have you been eating lately? and if pork, or pie, or cake is mentioned, he exclaims triumphantly, "That's what did it," and prescribes pepsin, followed by a saline; forgetting that there are hundreds of men, women, and children in the rural parts of that very community who habitually have soda-biscuits and doughnuts for breakfast, fried pork and mince-pie for dinner, or baked beans and "oak-bark" tea for supper, and never find out that they have a stomach.

We are supposed to be a nation of dyspeptics. This peculiarity is variously attributed to the use of the frying-pan, mince-pie, too rich foods, hurried meals, tobacco, and insufficient mastication. Abernethy held these views as to mastication, for his crusty advice to the rich American who consulted him for indigestion was simply to expend upon his food the jaw-power that he wasted upon his quid and the saliva that he squandered upon his carpets.

Part of our troubles are no doubt due to the thoughtless way in which we revel in the cheapest, most varied, and abundant food-supply the world has ever seen. More may be traced to our senseless neglect of the comforts and decencies of the table—and as of almost anything else—in our mad rush after the nimble dollar.

But these causes alone are by no means adequate, for we must remember that if our American dietary is prodigally rich and varied, it is also the most abundant, the most nutritious, and, broadly considered, the most easily digestible in the world. We know nothing of the insufficiency, the coarseness, the deadly monotony of European peasant and even middle-class diets; while as for indigestibility and "unhealthiness," what have we to compare with sauer-kraut, boiled dough, cabbage-soup, black bread, unleavened "leather" cakes, and raw sausage? Our "twenty-minutes-for-dinner" style of eating is no doubt injurious, but even in this connection our cookery has been adapted to our habits and everything boned, minced, hashed, and cooked to a pulp, so that our teeth are actually decaying from lack of exercise. It is the rush back to work *after* the dinner that does the mischief, and not the mere mechanical obstacle of imperfectly masticated food.

But the most fatal objection to this theory lies in the fact that the mass of our dyspeptics are "dieters" to a man—or woman. They talk "health-foods" from dawn to dark; they abstain from biscuit, from fried cakes, from the pleasant pie and the juicy cabbage; they shudder at the mention of pork, "anything that has lard in it" is as an unclean thing to them. They mortify the flesh on Graham gems and similar atrocities, on oat-meal and germ-foods, on quarts of hot water and slops of every description—and still they suffer. The more carefully the diet is "regulated" the worse, as a rule, is the "dyspepsia."

When any man attempts to substitute his own puny "reason" for the instructive wisdom of a thousand generations he usually makes a mess of it. Digestives give only temporary relief. The trouble is not with the food, nor yet with the stomach, but with the whole individual. Take one of these valetudinarians out into the open, put an oar or a fishing-rod into his hand, or a twelve-bore across his shoulder, and let him thrash the streams or tramp the uplands from dawn to sunset, and what of his dyspepsia? Within forty-eight hours he will be devouring the swimming salt pork, the substantial sausage, and the alkali biscuit of his farm-house fare with relish and impunity. His muscles loudly demand such pabulum, and their servant, the stomach, takes care of it, as ordered, without remonstrance. In short, in most cases of dyspepsia the stomach is the point of greatest stress and strain in a generally enfeebled and devitalized organism, and consequently the place where the

breakdown occurs. Let the business "hustler" and the model housekeeper relax the strain and tension and their dyspepsia will improve *pari passu*.

Discomfort here, as elsewhere, is a danger-signal that should be heeded and brakes whistled down at once, instead of being muffled by pepsin. Even regulating the diet is at best a mere palliative and a serious mistake ultimately. The pressure on the stomach is lightened thereby, but the strain on the whole system continues unchecked. More than this, "regulation" usually involves the substitution of less nutritious and substantial foods than before, and the *circulus vitiosus* is actually strengthened thereby. The stomach refuses to digest fats and proteids because its blood-supply is of poor quality; it is humored with sugars, starches, milk, etc., and thus the blood is cut off from the very supplies out of which it might have repaired its deficiencies and sinks more deeply in the mire of degeneration.

Pepsin and dieting in such cases are but little more rational than the use of opium. We ought to go to the root of the matter and never rest satisfied until our dyspeptic patient's stomach is in such condition that it will digest *anything* in reason that he puts into it. We should insist upon whatever possible changes in his hours, responsibilities, habits, and recreations may be necessary to attain this standard. A dyspepsia cured by dieting is a dyspepsia uncured. To relieve gastric distress in such cases by reducing and watering the diet is like easing a crushing machine by increasing the distance between its rollers; it continues in operation with less motive power, but what sort of work does it do? A man may continue to exist on Graham bread, milk-toast, beef-tea and gruel, but he does not really *live*, still less grow and repair waste.

Instead of encouraging our patients to avoid everything that "disagrees" with them, we should urge them to a persistent effort to make everything agree with them. Let us insist that they make themselves not merely "stomach-hungry," but "muscle-hungry" every day, and all other things shall be added. Our standards of "dyspepsia" have been altogether too low in the past. Any sort of a diet that could be devised that a man could shuffle along upon, extracting a living out of it, without actual discomfort, has been considered sufficient. An able-bodied stomach, even less than this, a really "practical" digestion, must be capable of assimilating not only all digestible things, but a great many so-called indigestible ones as well. A cruiser that is to steam ten knots an hour as a routine pace must have a possible speed of at least fifteen knots under pressure. It would not be a bad idea to fix upon a "standard food" that our dyspeptic stomachs should be required to digest before being allowed to consider themselves cured—pork, for instance, for, leaving idiosyncrasy out of the question, any one who cannot digest this in the form of breakfast bacon or ham ought to be regarded as dyspeptic *in posse*, if not *in esse*, or, to borrow a term from circulatory pathology, as suffering from "gastric inadequacy." As a matter of fact, almost every Gentile whose dietary does not include pork in some form is either dyspeptic or will soon become so. Dyspepsia is emphatically a disease of under-feeding, instead of over-feeding. In practice one will see more cases cured by pork than by pepsin.

Dyspepsia should be treated as a symptom sometimes—as we are at last learning—as a reflex neurosis, and essentially as a systemic instead of a gastric disease, and it will cease to be one of the *opprobria medicinæ*.

EDITORIAL COMMENTS.

"*Publishing the Formula*" is a delightful recreation of the *fin de siècle* nostrum-vendor. One wonders which most to admire, the enormous impertinence of the "publisher" or the gullibility of the public. Perhaps it may turn out that the egregious ascription of stupidity to the asinarian public, professional or lay, is the only thing to wonder at. For how can men think to hoodwink even the stupidest people nowadays by such a gambler's game of now-you-see-it-and-now-you-don't? *Can* people be bamboozled by such nonsense, and *can* the bunco-men be guilty of such attempts as the jingling together of a lot of chemic names and calling that a formula? Verily, men are driven to desperate straits when they do such things. The latest instance is contained in a pamphlet now before us, entitled (of course) "a new consumption-cure." The author thus delivers himself:

> I may add that there is a further reason for reluctance in setting forth the claims herein presented. It is the inevitable violation of "the sanctities" of Medical Ethics—the excitement of prejudice on the part of many physicians—incident to advocating a so-called "Secret Remedy." For this, however, I can only express a sincere regret, without in the least apologizing for my position.
>
> I am not an M.D., and so not amenable to any professional Code of Ethics. The broader ethics of civilized humanity accord to every man proprietary rights in the discoveries as well as the creations of his own genius. The just sentiment of mankind in general as well as my own conscience will sustain me in retaining that right, at least for a time, through the only possible means—keeping my formulas and modes of manufacture to myself. I am, moreover, happy in the assurance

that there are men, even in the ranks of regular medicine, broad-minded and generous-hearted enough to accord me that right without cavil. They will examine the evidence, and, upon proof, will acknowledge gladly the improvement made upon any methods known to them of combatting the worst disease with which they have to contend. Enough such men there are to afford me all the "moral support" needed in facing the opposition of their more numerous, but less noble brethren. I may be pardoned, too, for saying that the renunciation of "secret and proprietary remedies" on the part of the medical profession is, I am informed, to a very large extent a virtue held more in theory than in practice. To a still larger extent it is a rule of faith, ignored as wholly obsolete.

"Nine-tenths of the profession"—I quote from one of its own members who has ample knowledge of the facts—"nine-tenths of Medical Practitioners are daily using and prescribing drugs and compounds whose exact composition and mode of manufacture they do not know. These are practically 'secrets' belonging to the pharmaceutists, who put forth these remedies with the most voluminous and attractive forms of advertisement possible."

Thus the benevolent discoverer squares his conscience in accordance with that of the "broad-minded and generous-hearted" secret-nostrum men, and against the "more numerous, but less noble brethren" who have no therapeutic secrets. (It is an interesting psychologic study to see how the lower one sinks in the slime of selfishness and quackery and deceit, the more he prates of broad-mindedness and brotherly love, and swashes about in the slush of maudlin sentimentalism.)

But a later pamphlet shows that our new-consumptive-cure man was not quite satisfied with his broad-mindedness, etc., for here he makes a great hullabaloo in the *Rocky Mountain News* about publishing the secret. At last "THE FORMULA IS HERE," and it reads thus:

Up to this time we have not revealed the constituents of the gas, but feel that it is now time to do so, and learn whether or not, since it is open to the profession to know the truth without violation of ethics, they will take heed of it. I will take this step because a number of physicians who have witnessed the results of my work think it may be the opening of a new era to medicine. So, without attempting to detail all the steps of my discovery, I name those elements which constitute the essential active principle in the Electro-Inhalent Consumption Cure.

Formula—Calc. chloride, Potas. bromide, Potas. chlorate, sodium chlor., alum, c. p. oxygen.

These elements, treated with static electricity, give rise to an antiseptic gas of the most peculiar form. It is unlike anything else hitherto known, both in nature and effect, etc.

We would not have occupied so much space with this trash if the method of exploitation did not seem to run the danger of becoming fashionable, even in some so-called medical circles.

Intrauterine Conveyance of Typhoid Fever. — While clinical evidence has not been wanting of the transference of disease from the pregnant mother to the fetus *in utero*, the subject has been much enlightened with the progress of bacteriologic science. Although one cannot in strict construction speak of tuberculosis being inherited, a number of observations have shown that the offspring of tuberculous mothers may be born tuberculous. We have in this instance, however, much the same kind of transmission of the disease as may occur at any time from one infected person to another, albeit in the nature of things more direct—but this is not heredity. The conveyance takes place through the intermediation of the placental blood, and in the same way as the infection of the mother took place, and is not developmental. The same processes are active in the infectious diseases as a group, but the demonstration has not yet been generally made. In this connection an exceedingly interesting observation has been noted by FREUND and LEVY (*Berliner klinische Wochenschrift*, 1895, No. 25, p. 539), who have reported the case of a woman, twenty-four years old, who in the fifth month of her third pregnancy was attacked with typhoid fever. The highest temperature reached was 104°, and the variations for two weeks ranged between this and 100.4°. In the fourth week of the disease, when the temperature rarely exceeded 101.3°, the fetus was rather suddenly expelled. A single vaginal examination had been made with the greatest care, the hands being disinfected with mercuric chlorid, the external genitalia being washed with soap and water, and they and the vagina irrigated with lysol, followed by the application of a cotton pad. The fetus was directly received into a sterilized glass vessel, but lived for only a short time. There were no complications and the woman went on to recovery. The uterus contracted well, and the placenta, which was expelled within a short time, was received into the same vessel as the fetus. The placenta was distinctly marginate; the entire decidua remained in the uterus, but was readily detached with the finger. In the sixth week after delivery the woman suffered a relapse of the fever, lasting ten days. Twenty minutes after the birth of the child cultures were made from the splenic fluid, the blood, and the placenta. In the course of three days a number of typhoid-colonies were found in the placental and splenic inoculations. Similar colonies also developed upon plates prepared from bouillon into which a portion of spleen had been thrown, and which had been kept in a thermostat for twelve hours at a temperature of 98.6°. The fetal spleen was slightly enlarged and soft, but the intestines presented no lesion. Neither hemorrhage nor infarction nor other noteworthy morbid change could be detected in the placenta.

In this case the expulsion of the fetus must be attributed to the infectious process with its concomitant manifestations, for both the placenta and the fetus presented no well-defined evidences of disease.

The Bicycle-ambulance and the Bicycle.—From Germany comes the news of a novel utilization of the bicycle that seems likely to be of considerable interest and value to the medical profession. One of the ingenious city physicians of Berlin has invented an emergency-ambulance consisting, roughly speaking, of a narrow spring-cot supported upon the frames of two bicycles and a third wheel. The cot is hung upon an elaborate set of springs and is provided with a water-proof coop-like cover of canvas stretched over steel bows, which can be readily lifted on and off like a lid. A seat is arranged at the head of the bed, over the third wheel, for the doctor, beside which is a box for remedies and dressings. Thus the physician (if young and active) and one attendant can

rapidly propel the machine to the site of the accident, while the patient is placed upon the cot with the doctor seated where he can give his whole attention to the former, and the outfit is propelled back to the hospital. The ambulance is so light and strong in construction that the run can be made at quite as high a rate of speed as is compatible with safety. The advantages are obvious—no horse, feed, or stable is required (the latter with its large space-requirements and odors being quite an item in city hospital-premises). No shed is needed for the vehicle and horse to stand in while awaiting a call; there are no delays, *e. g.*, in ordering by telephone from the stables, etc. The machine can be kept in the receiving-room or entrance corridor, and with wide doorways and a gangway at the entrance-steps can be pushed with its burden right into the ward and the patient lifted directly upon his bed. We are already much indebted to the bicycle as a most beneficially athletic substitute for the traditional "doctor's cart," as a new and attractive "oxidation-prescription" for our patients, as a means of giving city-prisoners a knowledge of the country, etc. Perhaps there should not be omitted a word of praise to it as the only influence in nineteen centuries that has had the slightest appreciable effect in inducing women to make a rational modification in their attire. For this let us bow before "the wheel" with grateful respect, for it has done more in ten years than we have in as many generations—it has made an impression upon the fashion-plates. Will it bring about the abolition of the petticoat-abomination? The skirt, may we believe, is at last "divided against itself," and perhaps even the corset will be scheduled as the next to "go." One cannot "scorch" in a strait-jacket. All honor to the bicycle! It has made a breach—we will not say breeches—in a rampart against which the united forces of the profession, the bench, and the pulpit have surged in vain.

The Treatment of Typhoid Fever with the Serum of Immunized Animals.—We have on previous occasions cited experiments in the treatment of typhoid fever with the serum of convalescents[1] and with the products of bacterial activity.[2] It was to be expected that the recent developments in the antitoxic treatment of diphtheria would stimulate renewed activity in this direction, even though it is not yet possible to reach a final conclusion.

As a contribution to the progress in this field of investigation Klemperer and Levy (*Berliner klinische Wochenschrift*, 1895, No. 28, p. 601) detail the results of a series of interesting observations upon the influence of the milk and serum of immune animals in preventing typhoid fever and ameliorating an already existing attack. As, on account of the long course of the disease, repeated treatment would be necessary, it was at once seen that considerable quantities of the immunizing fluid would be required, the first experiments were undertaken with the milk of immune animals. This was readily obtained by immunizing a goat. It was found that this method was impracticable, as the immunizing influence of the milk was lost by ingestion through the stomach, and injection into the bowel, though efficient, is obviously not feasible in typhoid fever. It was, therefore, finally concluded that resort would have to be had to blood-serum. With this end in view the dog, as having considerable natural immunity to the disease, was selected as the most suitable animal. By treating dogs with gradually increasing amounts of bouillon-cultures of typhoid-bacilli it was possible not only to immunize susceptible animals, such as mice and guinea-pigs, to the action of virulent typhoid-bacilli, but also to effect a cure of the attack when treatment was instituted some time after infection had been established.

After it had been determined that the serum thus obtained was innocuous when administered to human beings in small quantities by subcutaneous injection, the treatment of five patients with typhoid fever was undertaken. Each of these received three injections on successive evenings. These were well borne and gave rise to no discomfort, or exanthem, or albuminuria. All of the cases were in the first week of the disease, and all pursued a mild course. It is admitted that the disease was not aborted by the treatment, although it was thought the attack was simplified and abbreviated, the natural immunity being hastened. At the same time the observations show that the treatment is perfectly harmless.

Chronic Inebriety and its Incurability.—In the annual report of the Walnut Lodge Hospital for Inebriates, Dr. T. D. Crothers gives a record of 66 patients that had been treated in the institution previous to 1885. Of this number 21 are dead, having relapsed and brought on death by their excesses, 16 are living orderly temperate lives and can be considered cured, 4 are insane, 10 are hopeless inebriates, and 15 are given to occasional sprees. The small percentage of permanent cures is somewhat discouraging, though, as a rule, only the more chronic drunkards seek hospital-treatment.

Of 58 inebriate patients treated in 1894, 43 had been in other institutions previously. The number of relapses from the so-called "gold-cure" is increasing, and Dr. Crothers finds symptoms of acute insanity common among such individuals.

The chronic inebriate must be handled in a different way from the acute alcoholic. Some States have a so-called Habitual Drunkard Act, under which persons arrested several times for drunkenness can be committed to an inebriate-asylum for an indefinite period of time. If all chronic drunkards were thus treated and kept under lock and key, the cost would no doubt be very great, and yet only a tithe of what it is at present. Persons have been sentenced to imprisonment thirty and more times a year for drunkenness. More than one-half of all arrests are for this cause. The chronic drunkard is a constant menace to society, a clog on the wheels of industry, and the amount of trouble that he causes is incalculable. He must be restrained, as the lunatic is, for the safety of society.

A "Pathological Meeting."—According to a notice in *The Lancet* of June 29, 1895, "A Pathological meeting of the Neurological Society will be held on July 11th." And notwithstanding many such things, our humor-loving and kind-hearted British friends find much pleasure, to which, of course, they are heartily welcome, in measureless contempt and scorn of "Americanisms."

[1] THE MEDICAL NEWS, Nov. 19, 1892, p. 583.
[2] Ibid., Dec. 16, 1893, p. 691.

SELECTION.

VIVISECTION AND KINDNESS TO ANIMALS.

ACCORDING to the biographic sketch of Professor Mosso, Ludwig, the greatest of vivisectors, was President of the Leipsic Society for the Protection of Animals, and remained to the last one of its most active members. Germany owes it to him that her horses and beasts of burden are now humanely treated. To him is due that awakening of the true humanitarian spirit toward the brute creation that culminated in the "Verband der Thierschutz-Vereine des Deutschen Reichs" (Union of German Societies for the Protection of Animals). It was mainly from her sense of the gentler attitude to be encouraged toward animals on the part of the rising generation that Leipsic made him an honorary citizen on the fiftieth anniversary of his graduation in medicine. "No physiologist," continues Professor Mosso, "has ever sought with greater frankness than he to impose just limits on vivisection. The gates of his institute were ever open to all who wished to assure themselves that he, in the midst of his experiments, knew how to spare suffering. The vivisector's art attained such perfection in his hands that, having to sacrifice an animal, he did not let it feel that it was even being tied. He would apply the muzzle and instantly proceed to the exhibition of ether or chloroform, which, in a few seconds, in a dog, for example, made it insensible." "It is an error," adds Professor Mosso wisely, "to believe that experiments can be performed on an animal which feels. The perturbation induced by pain in the functions of the organism is so profound as to render useless the experimenter's study. It was Ludwig who uttered the celebrated *mot* that some physiologists, to study the nervous system, act like him who fires a pistol into a watch to see how the chronometer works. Suffering ought to be entirely eliminated from physiological experiment, because the instruments we employ to-day are so delicate that they become unserviceable the moment the animal is agitated or moves."—*Lancet*, No. 3748, p. 1651.

REVIEWS.

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN, FOR PHYSICIANS AND STUDENTS. By B. SACHS, M.D., Professor of Mental and Nervous Diseases in the New York Polyclinic, etc. Pp. 666, 162 illustrations. New York: William Wood & Co., 1895.

This book, written by one of the ablest of American neurologists, is a valuable contribution to neurology and pediatrics. It contains much original material, and everywhere bears the impress of the author's experience.

In an interesting introductory chapter are given the author's methods of investigating nervous disease in children, including various examination-schemes and the modes of testing vision, motion, sensation, and the like.

The general arrangement of the book is simple but good. Part I is devoted to general nervous diseases, under which head are included convulsions, epilepsy, hysteria, chorea, tetanus, tetany, headache, disorders of sleep, vasomotor affections, and trophoneuroses. Organic diseases of the nervous system are considered in Part II, chiefly under two heads, organic diseases of the spinal cord and organic diseases of the brain, but with two prefatory chapters on diseases of the peripheral nerves. As might be expected, the author has had considerable difficulty in determining what diseases to include and what to omit, as many of the nervous diseases of children also occur in adults. He has, however, exercised good judgment in this respect, very properly not discussing tabes and some of the forms of sclerosis; on the other hand, considering such disorders as epilepsy, hysteria, and tetanus, which occur both in children and in adults, and in children have points of special importance. Huntington's chorea and progressive muscular atrophy of the Aran-Duchenne type have also been properly given a place, these affections needing to be related to and contrasted with the dystrophies, atrophies, and choreas and family forms of disease occurring in children.

The chapters on diseases of the spinal cord and of the brain are introduced by careful but not too elaborate discussions of their anatomy, physiology, and pathology, excellent judgment and discrimination being displayed in the selection of the material, which has been drawn from the work of the most recent investigators.

In a brief appendix are given a few valuable therapeutic suggestions.

A notable and valuable feature of the work consists in the tables of differential diagnosis scattered throughout the volume, and evidently prepared with great care. They will prove of particular value to students and general practitioners. An especially valuable table for practical purposes is found in the introductory chapter, under methods of investigation. Beginning with the ciliary and sphincter iridis muscles and proceeding to the quadratus lumborum and abdominal muscles, this table gives in parallel columns the names of all the important muscles with their normal functions, the symptoms of deficient action, innervation, and the diseases in which the muscles are commonly involved.

Space will not permit an analysis of the book worthy of its contents, and where there is so much to approve it is difficult to pick out special portions for commendation.

Many of the shorter articles, such as those on abscess of the brain and sinus-thrombosis, are compact yet lucid expositions of the subjects considered. The discussion of infantile cerebral palsies is the best in any text-book, showing much original work, clinical, histologic, and pathologic. Muscular atrophies are thoroughly discussed, the points of distinction between the spinal, neural, and myopathic forms being clearly brought out both in text and tables.

Under the head of hereditary or family diseases of the spinal cord are included hereditary ataxy, hereditary spinal paralysis, the family type of progressive muscular atrophy, etc. It would probably have been best to put in this same category of family diseases hereditary chorea, Thomsen's disease, and congenital paramyotonia, as, strictly speaking, these affections are not spinal or cerebral, but cerebro-spinal and of embryonal origin.

The chapter on insanity is brief but sufficient for a general work on the nervous diseases of children.

Particular attention has been given to the subject of arrested and aberrant development, and the evidences of this work are seen in several portions of the book, es-

pecially in the chapters on defective development of the brain and on idiocy and imbecility.

Short bibliographies are appended to each chapter. Although thoroughly acquainted with foreign neurologic literature, the author has not neglected the writings of his own country. The letter-press and illustrations are of the highest order.

FIRST ANNUAL REPORT UPON THE BIRTHS, MARRIAGES, DIVORCES, AND DEATHS IN THE STATE OF MAINE FOR THE YEAR ENDING DECEMBER 31, 1892. Augusta: Burleigh & Flint, 1894.

THIS report was compiled by the Secretary of the State Board of Health, Dr. A. G. Young, in accordance with an Act of Assembly approved in 1891. The statistical tables are accompanied by "Notes" elucidating the data presented, and containing instructive comparisons and comments.

The birth-rate for 1892 was 21.21 for each 1000 of the population; and for each 100 girls born there were 106.7 boys, a preponderance of the births of boys "which conforms with the results of the registration of births almost everywhere." The marriage-rate was 8.56 to every 1000, and there was nearly one divorce to every ten marriages solemnized!

The death-rate was 18.37 to every 1000 of population as returned by the census of 1890, and 18.30 on the estimated population for 1892. Among the causes of death tuberculosis, with a rate of 22.88 per 10,000, stands foremost, pneumonia following with a rate of 21.56. The rate for influenza, which was epidemic during the winter, was 11.43 per 10,000, which is partly accounted for by the fatality of this disease at the extremes of life and the proportionately large number of the aged to the total population, due to the emigration of young men and women to the Western States.

The number of deaths from whooping-cough exceeded that from scarlet fever, a fact that lends emphasis to the comment that the former is a more serious disease than the general public supposes it to be.

THE HUMAN ELEMENT IN SEX. BEING A MEDICAL INQUIRY INTO THE RELATION OF SEXUAL PHYSIOLOGY TO CHRISTIAN MORALITY. By DR. ELIZABETH BLACKWELL. New Edition. London: J. & A. Churchill, 1894.

THIS small book is, in the main, a plea for the instruction of parents in sexual physiology, as only through such knowledge can they appreciate their responsibilities as guardians of the young, and avert the evils arising from ignorance or pernicious teaching regarding the sexual faculty.

"It is the predominance of the mental or spiritual element in our nature," says the author, "which is the characteristic fact of human sex," a radical distinction between the sexual faculty in man and the brute creation greater than any resemblance between them. In virtue of this difference—of this human element—"sex in the human race is capable of great development toward good or evil," an important fact that bears a positive relation to tne well-being of succeeding generations.

Chastity is a physiologic law imposed in the interests of society, a providential check on the blind, unrestrained use of the sexual impulse necessitated by our physiologic structure for the vigor and continuance of the race. It is an equal obligation of the sexes; other reasoning (based on erroneous knowledge—misapprehension of the equivalent functions of ovulation and spermation) implies inferiority in the male—less power of self-control and of self-adjustment than is possessed by the female.

THE ROYAL VICTORIA HOSPITAL, MONTREAL. First Annual Report, for the Year ending December 31, 1894.

THE first annual report of the Royal Victoria Hospital, Montreal, which has just been received, presents several features of interest. In the first place, the secretary and the management are to be congratulated upon the clean, clear appearance of the pamphlet, and the medical staff upon the admirable arrangement of the statistical report. During the year 1570 patients were treated, with a death-rate of 5.9 per cent. The expenditure of the year was a little over $65,000, which seems to be an extremely reasonable amount, considering the extent of the hospital-plant.

The statistical report has evidently been prepared with great care, and in addition to the usual columns of the admitted and discharged there is a third noting the number of days in hospital.

It is interesting to note that on the medical side there were only two cases of appendicitis admitted, both of which were cured; while on the surgical side there were forty cases admitted. On turning to the table of operations one sees that thirty-six of the latter cases were operated upon, with three deaths.

Of typhoid fever eighty-four cases were admitted, seventy-two discharged cured, and only three deaths, a remarkably low percentage. It would be interesting to know if systematic hydrotherapy was employed.

We congratulate the management and the professional staff on the completion of the first year of what will doubtless prove a most beneficent work for the entire Dominion of Canada.

SYLLABUS OF GYNECLOOGY, BASED ON THE AMERICAN TEXT-BOOK OF GYNECOLOGY. By J. W. LONG, M.D. Pp. 133. Philadelphia: W. B. Saunders. 1895. Price, $1.00.

DR. LONG'S book is a tabulated synopsis of the *American Text-book of Gynecology*, interleaved for note-taking, and prepared with a three-fold object: First, to be used as lecture-notes; secondly, to enable the student more intelligently to follow and remember the lecture; and, finally, as a convenient reference for physicians. The book is well adapted to the purpose for which it was intended, but shows evidence of haste in its preparation. Thus we read of Hagar's colpoperineorrhaphy; dysmenorrhea is spelled with an *æ* at one place and an *e* at another; œdema is used throughout, while *ce*liotomy and gonnorh*œa* receive the preference; and colporraphy is spelled as here written. We are also told that the use of electricity in uterine fibroids is still *sub judice*. The book may be materially improved by the removal of such defects as those mentioned.

NEWS ITEMS.

Prof. Rudolph Leuckart.—It is proposed to celebrate the fiftieth anniversary of the accession of Prof. Leuckart to the doctorate, on December 13, 1895, by the erection of a marble bust of the distinguished zoölogist.

William W. Browning, A.M., M.D.—The degree of Master of Arts was conferred on Dr. W. W. Browning, of Brooklyn, by Yale College at its recent commencement.

Prof. Englisch has succeeded Prof. Dittel in the direction of the Third Surgical Clinic of the Vienna General Hospital.

For the James E. Reeves Fund.—We have received from Dr. G. L. Magruder, $1.

Meetings of State, National, and International Medical Societies.

	Meets.	Next meeting.
American Association of Obstetricians and Gynecologists.	Sept. 20, 1895	Chicago, Ill.
American Dermatological Association.	Sept. 17, 1895	Montreal, Can.
American Electro-Therapeutic Association.	Sept. 3, 1895	Toronto, Can.
American Medical Association.	May 5-8, 1896	Atlanta, Ga.
American Microscopical Society.	August 21-23, 1895	Ithaca, N. Y.
American Orthopedic Association.	Sept. 19-21, 1895	Chicago, Ill.
Canadian Medical Association.	Aug. 28-30, 1895	Kingston, Ont.
Idaho State Medical Society.	Sept. 9-11, 1895	Boise City, Id.
Illinois State Medical Society.	May 19, 1896	Ottawa, Ill.
International Congress of Gynecology & Obstetrics.	September, 1896	Geneva, Switzerland.
International Congress of Hydrobalneotherapy.	1895	Ostend.
International Congress of Otology.	Sept. 23-26, 1895	Florence, Italy.
International Medical Congress.	August, 1896	Moscow, Russia.
Medical Association of Georgia.	April 15, 1896	Augusta, Ga.
Medical Association of the State of Alabama.	April, 1896	Montgomery, Ala.
Medical Society of the State of New York.	Jan. 28, 1896	Albany, N. Y.
Medical Society of Virginia.	September 3	Wytheville, Va.
Mississippi Valley Medical Association.	September 3-6	Detroit, Mich.
New York State Medical Association.	October 15-17	New York City
Ohio State Medical Society.	May 27-29, 1896	Columbus, O.
Texas State Medical Society.	April, 1896	Ft. Worth, Texas.
Tri-State Medical Society of Illinois, Iowa, and Missouri.	Oct. 1-4, 1895	Des Moines, Iowa.
Utah State Medical Society.	Oct. 1, 2, 1895	Salt Lake City.
Vermont State Medical Society.	October 10, 11	Burlington, Vt.

BOOKS AND PAMPHLETS RECEIVED.

A Brief Note on Some Cases Recently Admitted to the Surgical Service at the New York Cancer Hospital. By Charles A. Powers, M.D. Reprinted from the New York Medical Journal, 1894.

Further Observations on the Physiological Occurrence of Conical Stump after Amputation in Children. By Charles A. Powers, M.D. Reprinted from the Medical Record, 1894.

Dermoid Cysts of the Orbit, with Report of a Case. By S. Potts Eagleton, M.D. Reprinted from the Codex Medicus Philadelphiæ, 1894.

Abscess(?) in the Urethro-vaginal Septum. By T. S. Cullen, M.B. Reprinted from the Johns Hopkins Hospital Bulletin, 1894.

Papillo-cystoma of the Ovary. By T. S. Cullen, M.B. Reprinted from the Johns Hopkins Hospital Bulletin, 1894.

Report of a Case of Epithelioma and of One of Sarcoma of the Larynx. By Arthur Ames Bliss, A.M., M.D. Reprinted from the New York Medical Journal, 1894.

Diseases of the Female Bladder and Urethra. By Howard A. Kelly, M.D. Pamphlet. Baltimore.

Official List of Medical Officers, Acting Assistant Surgeons, and Hospital Stewards of the U. S. Marine-Hospital Service; also List of U. S. Marine Hospitals and Quarantine-Stations. Washington: Government Printing Office, 1895.

Seventeenth Annual Report of the Presbyterian Eye, Ear, and Throat Charity Hospital. Baltimore, 1894.

Contributions to the Physiology and Pathology of the Nervous System. By Isaac Ott, M.D. Part XII. Reprints from the Journal of Nervous and Mental Disease, 1892-93-94.

Report of the Surgeon-General of the National Guard of the State of New York, 1894.

United States Bureau of Education. Circular of Information, No. 2, 1894. Contributions to American Educational History. Edited by Herbert B. Adams. No. 19. History of Education in Maryland. By Bernard C. Steiner, Ph.D. (J. H. U.). Washington: Government Printing Office, 1894.

Magnesium Sulphate as a Purgative: An Explanation of its Action when Administered Hypodermically. By James Wood, M.D. Reprinted from the Therapeutic Gazette, 1895.

Bromid of Ethyl as an Anesthetic in Oto-laryngological Practice. By A. W. de Roaldes, M.D. Pamphlet. New Orleans: L. Graham & Son, 1894.

Hysterical Pyrexia. By George J. Preston, M.D. Reprinted from the Maryland Medical Journal, 1894.

Cerebral Edema. By George J. Preston, M.D. Reprinted from the Journal of Nervous and Mental Disease, 1894.

Clinical Notes on the Diagnosis and Treatment of Apoplexy. By George J. Preston, M.D. Reprinted from the Maryland Medical Journal, 1894.

A Case of Probable Meningeal Hemorrhage, with Symptoms Resembling General Paresis. By George J. Preston, M.D.

The Value of a Medical Opinion. By J. Martine Kershaw, M.D. Reprinted from the Homeopathic News, 1895.

Laminectomy for Paraplegia from Pott's Disease; Tenotomy of Contractured Hamstring Tendons of Both Legs; Amputation at the Hip-joint; Appendicitis; Stone in the Bladder; Suprapubic Lithotomy. By F. C. Schaffer, M.D. Reprinted from the International Medical Magazine, 1894.

Transactions of the New Hampshire Medical Society at the One-hundred-and-third Anniversary, held at Concord, June 18 and 19, 1894. Concord, N. H.: Printed by the Republican Press Association, 1894.

Reports of the Trustees and Superintendent of the Butler Hospital for the Insane. Presented to the Corporation at its Fifty-first Annual Meeting, January 23, 1895. Providence, R. I: The Providence Press, 1895.

A Study of the Mode of Action of Ichthyol in Inflammatory Conditions. By D. Bradden Kyle, M.D. Reprinted from the Therapeutic Gazette, 1895.

"Stammering of the Urinary Organs" (Paget). By J. Henry C. Simes, M.D. Reprinted from the University Medical Magazine, 1895.

Hysterical Syncope, Hemianesthesia, Rapid Respiration. By Charles W. Burr, M.D. Reprinted from the University Medical Magazine, 1895.

Some Points in the Prevention and Treatment of Puerperal Fever. By Charles Rosewater, M.D. Reprinted from the Cleveland Medical Gazette, 1895.